

FIG. 1A

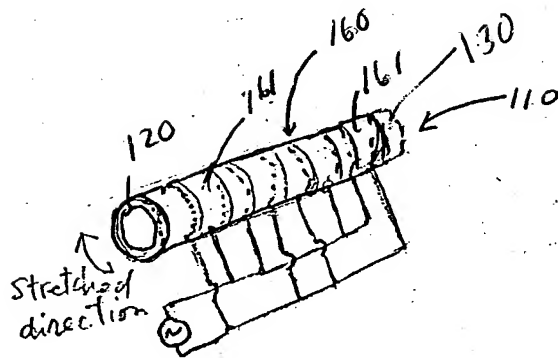


FIG. 1B

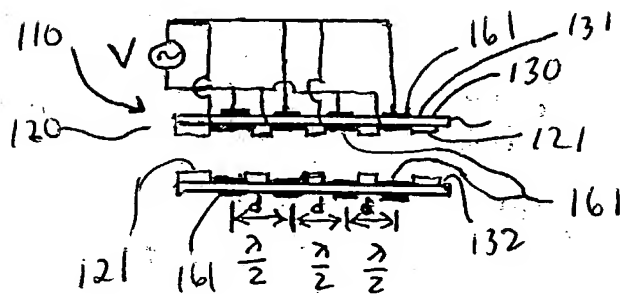


FIG. 1C

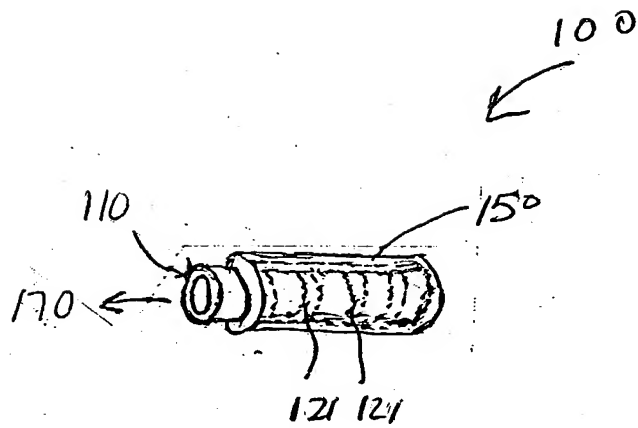


FIG. 1D

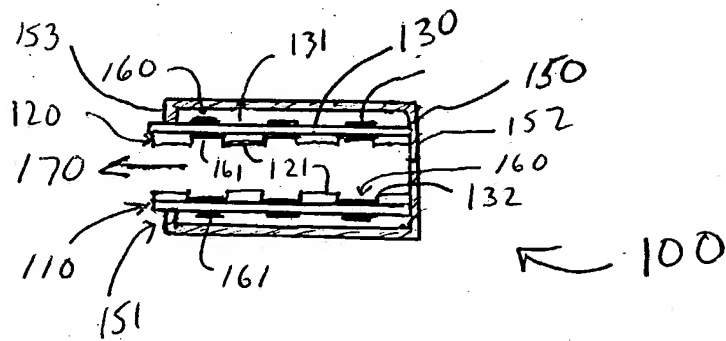


FIG. 1E

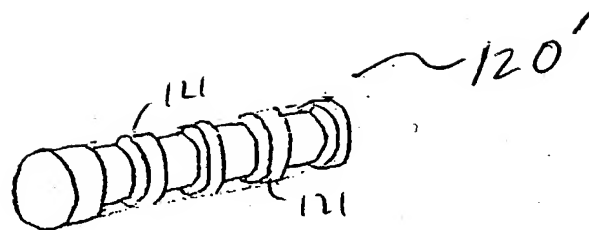


FIG. 2A

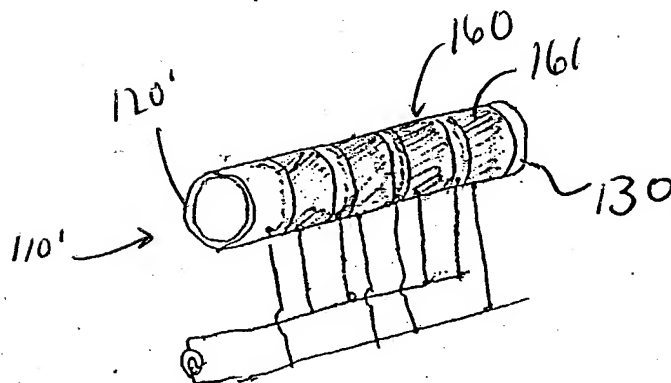


FIG. 2B

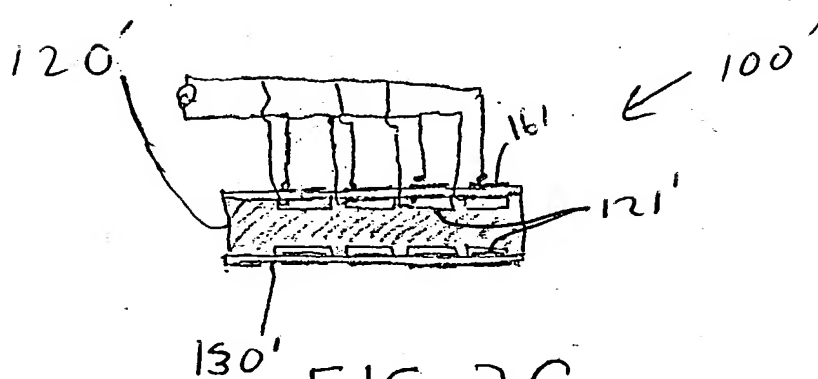


FIG. 2C

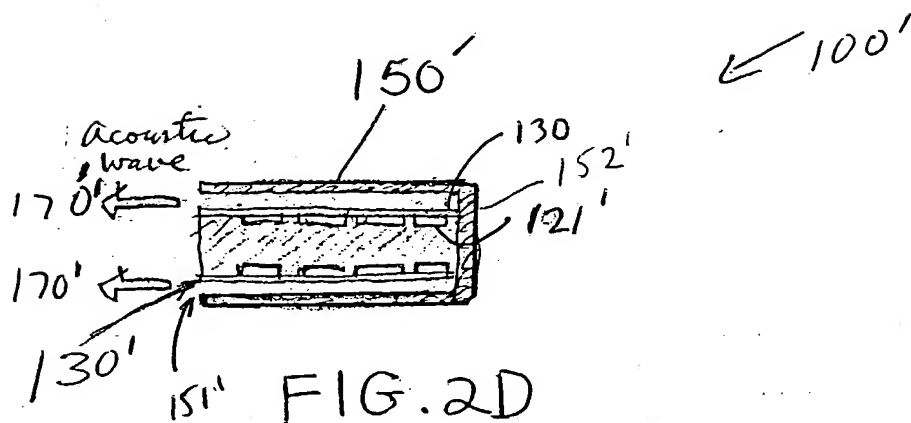


FIG. 2D

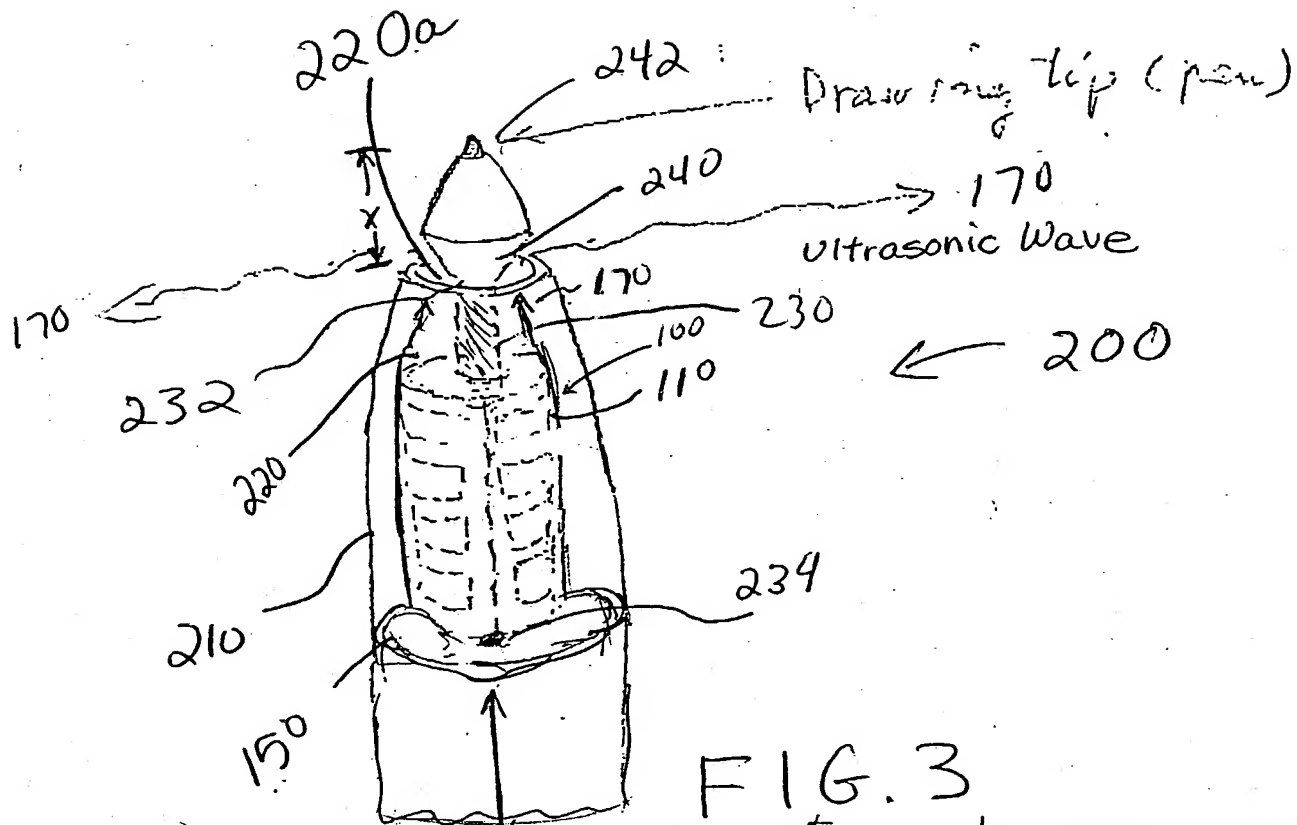


FIG. 3

Another shape of ultrasonic wave exits

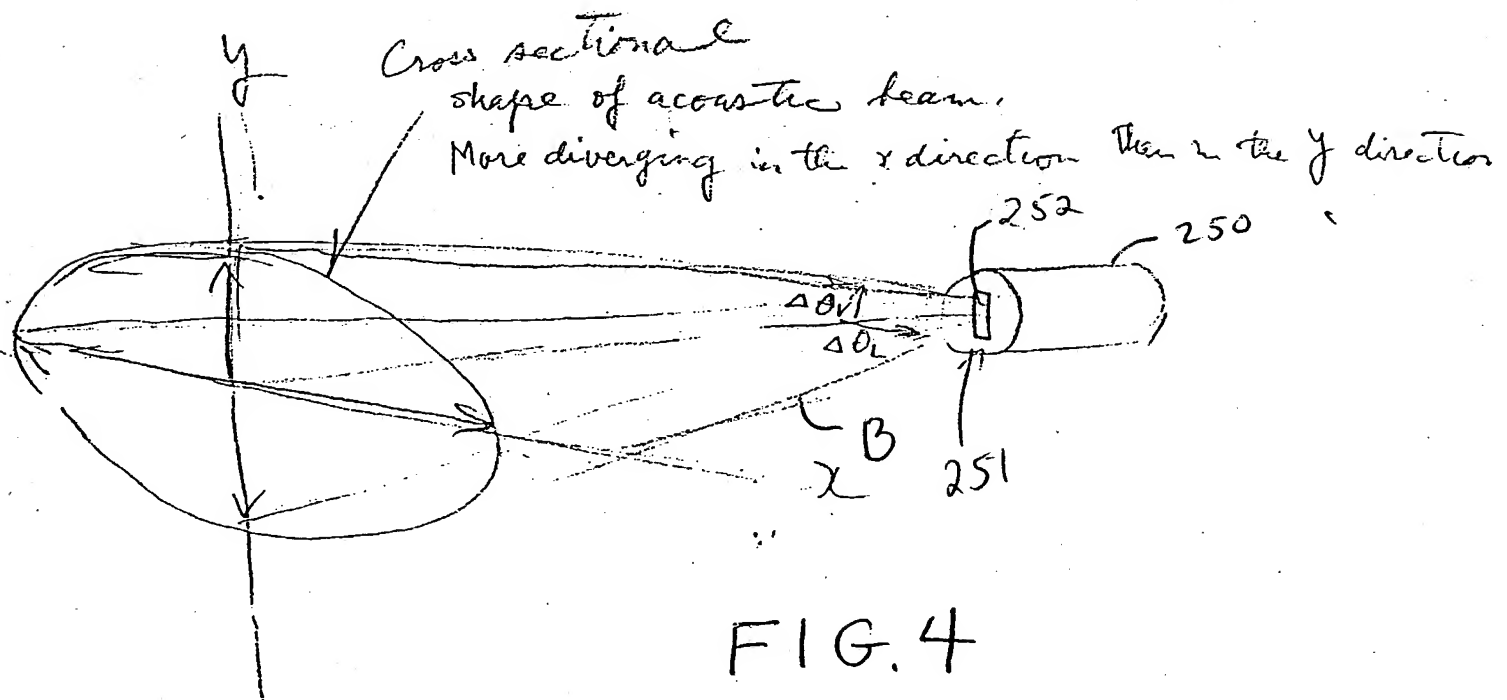


FIG. 4

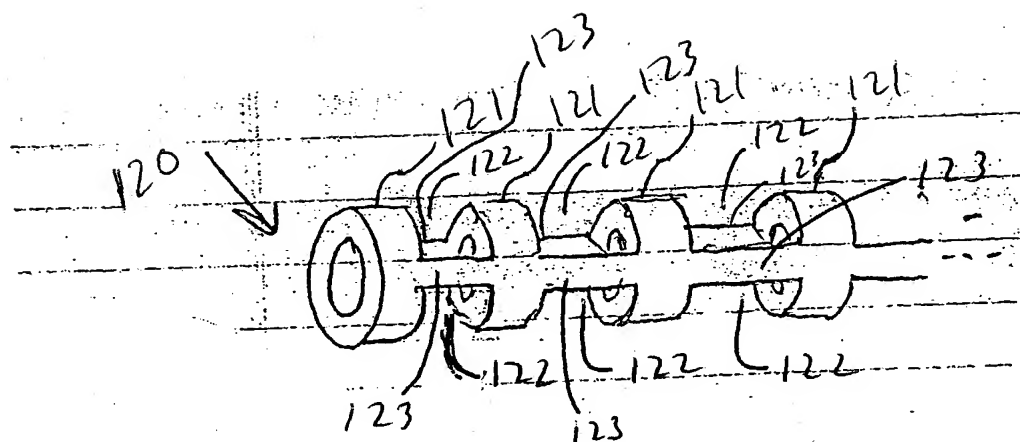


FIG. 5A

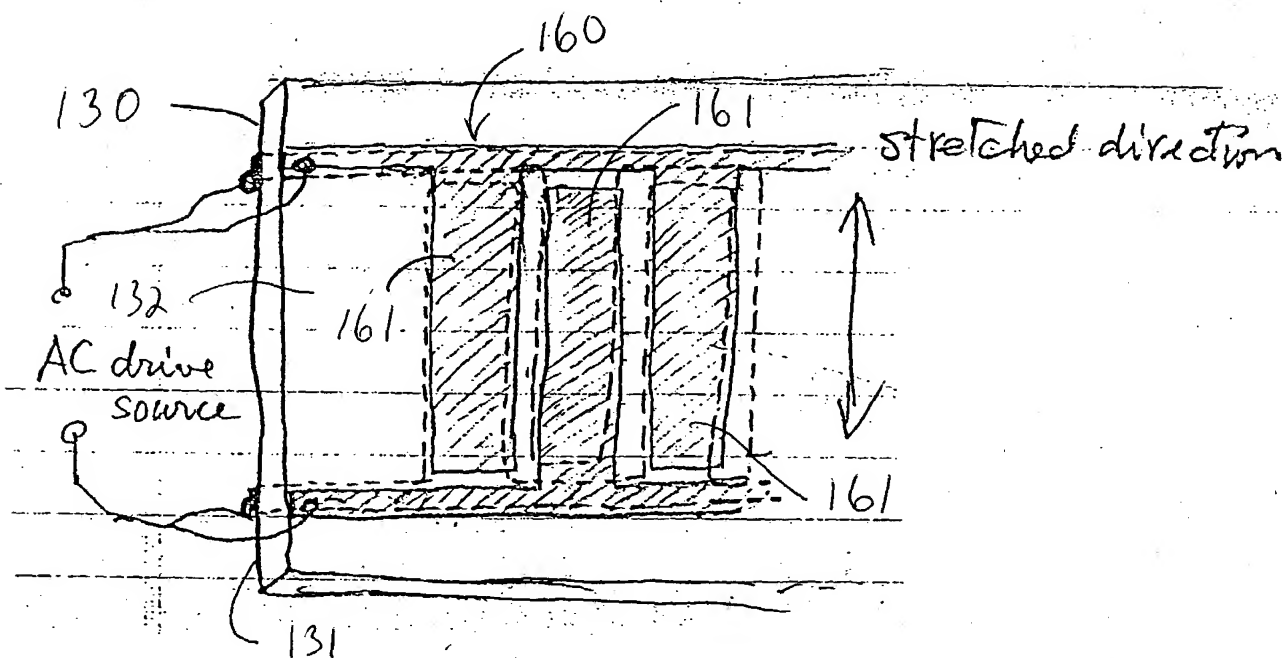


FIG. 5B

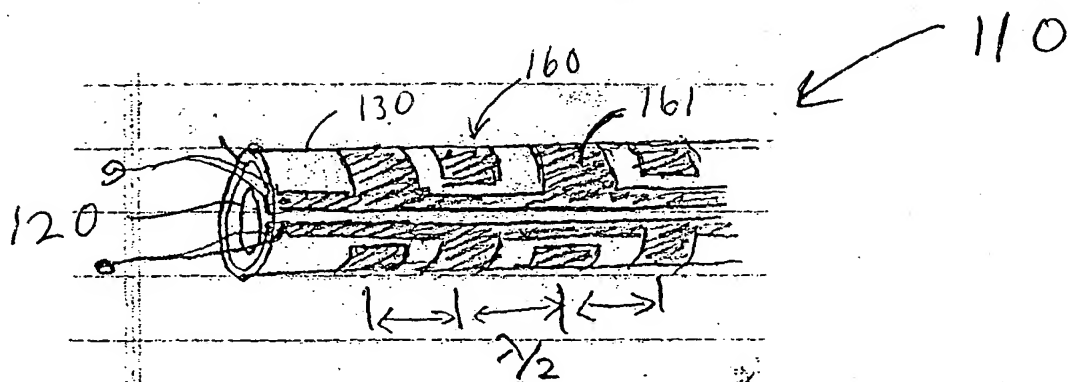


FIG. 5C

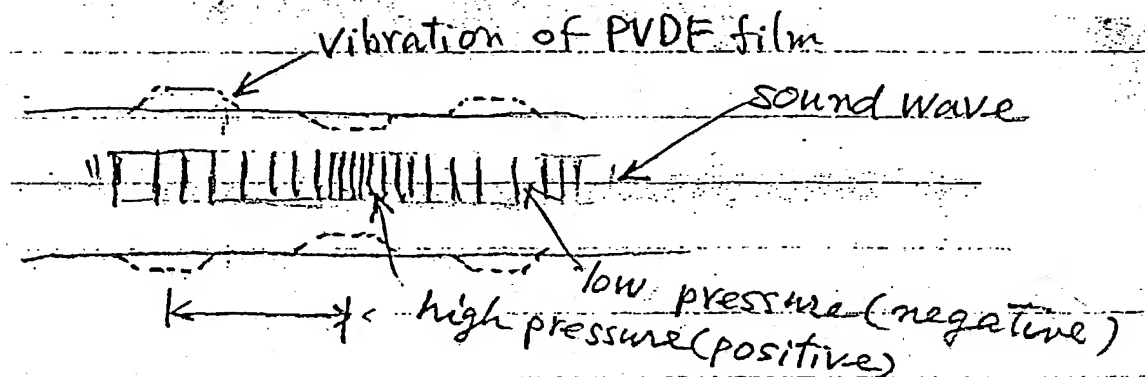


FIG. 6

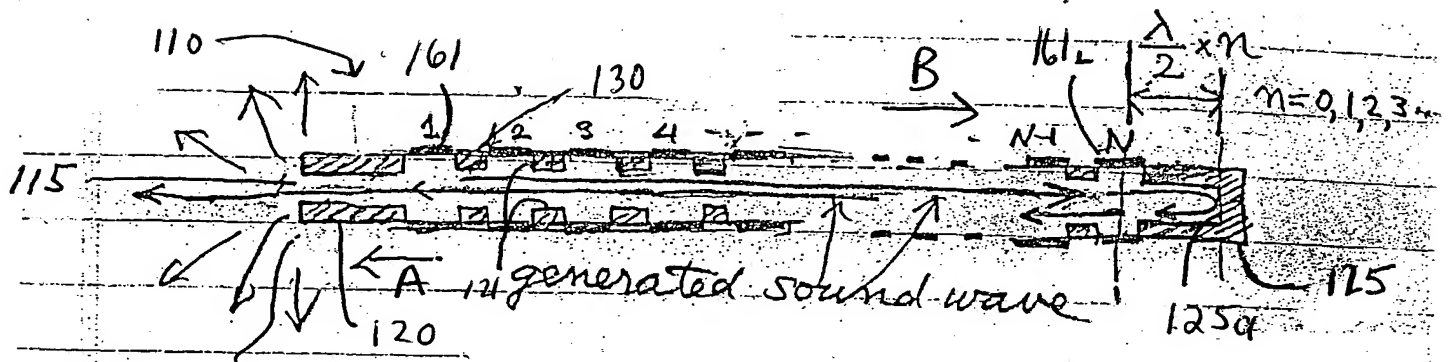


FIG. 7 [cross-sectional View]

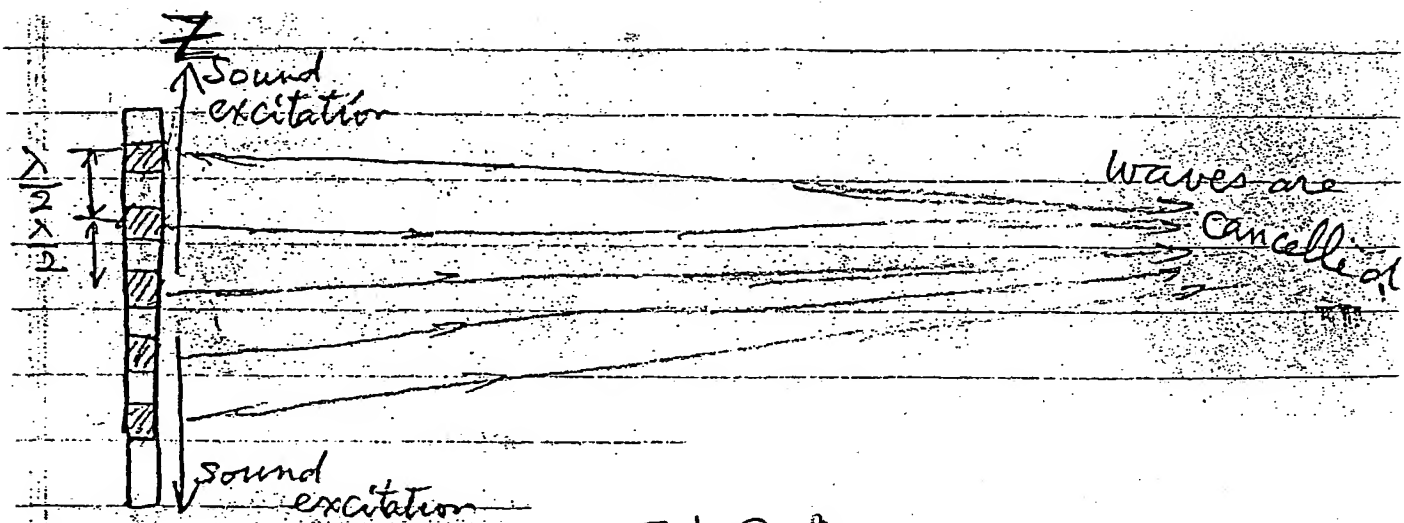


FIG. 8

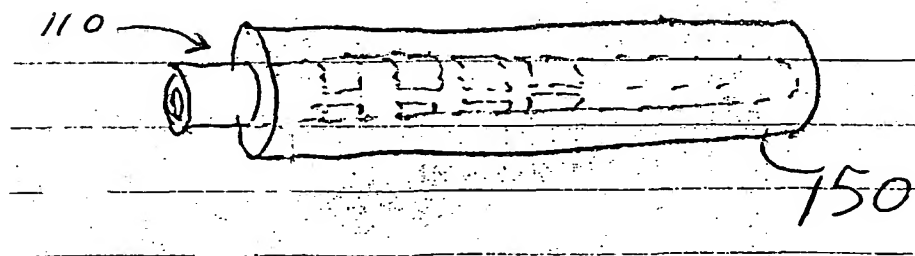
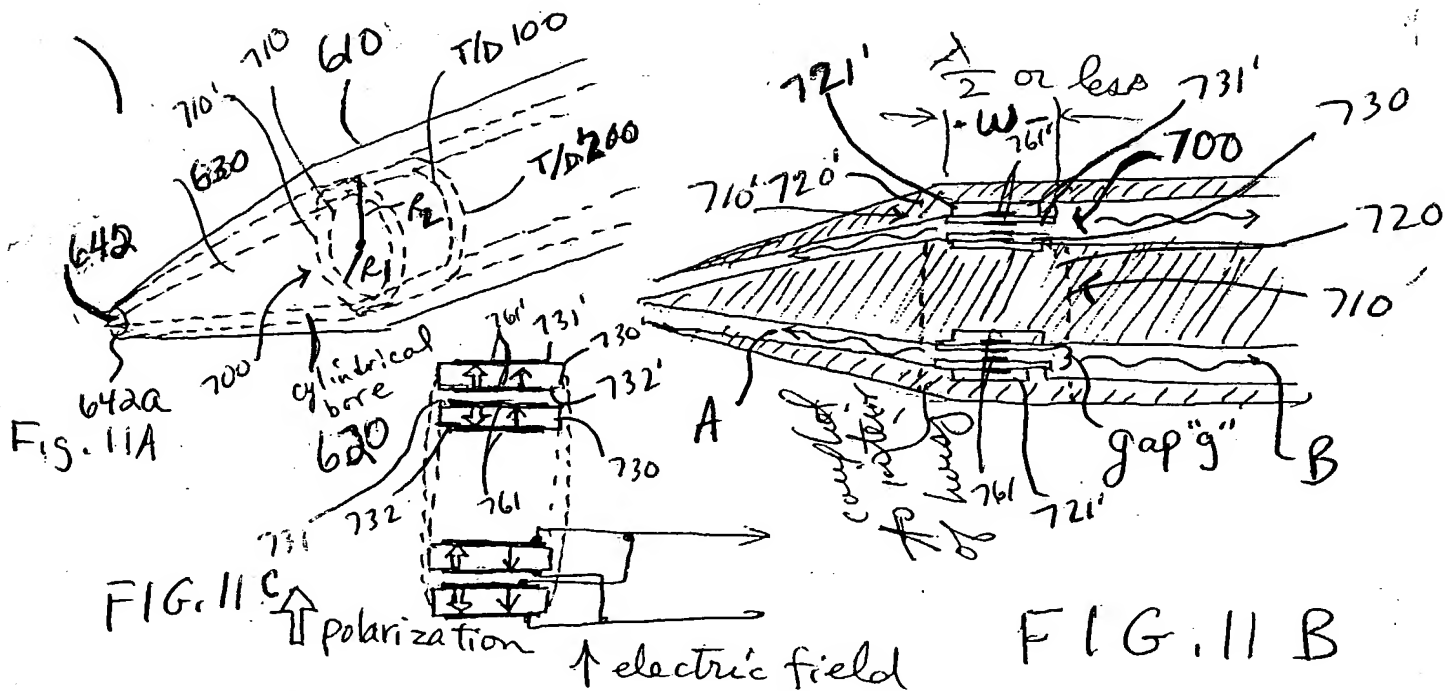
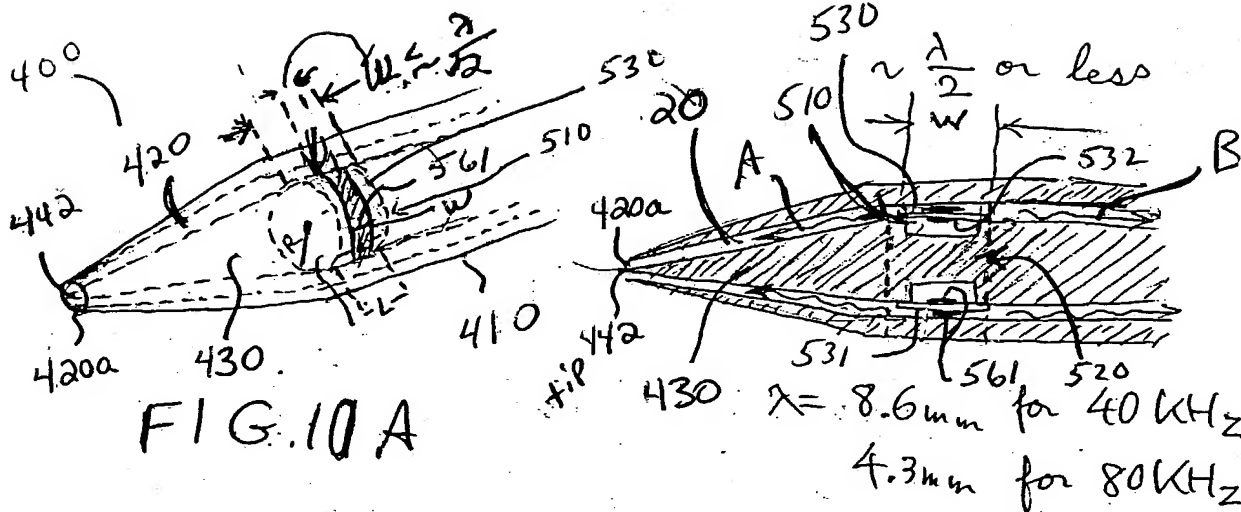
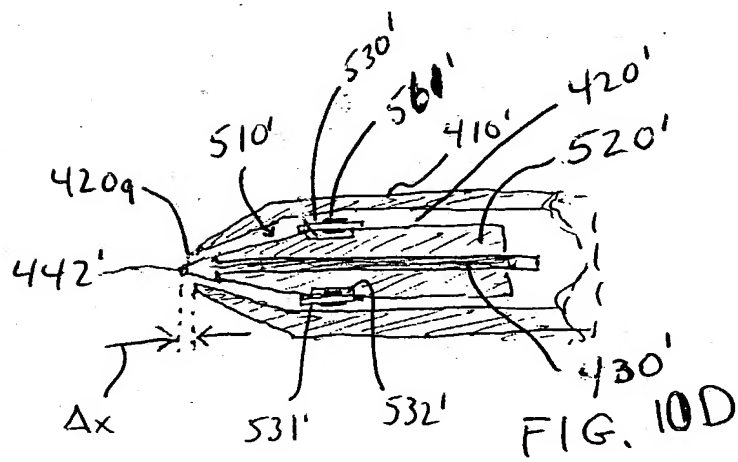
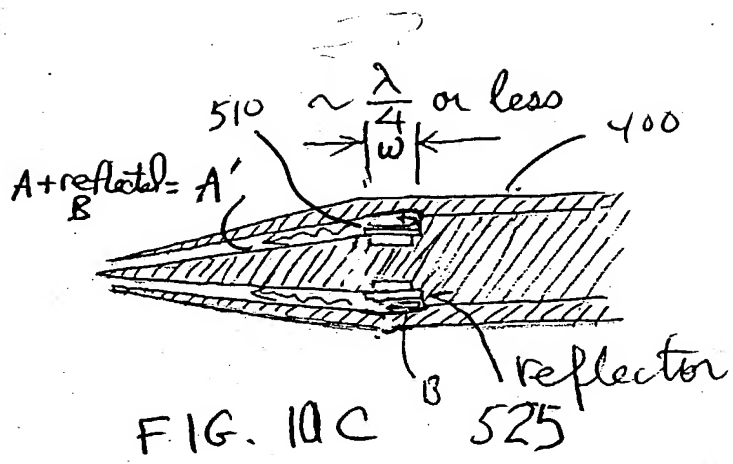


FIG. 9





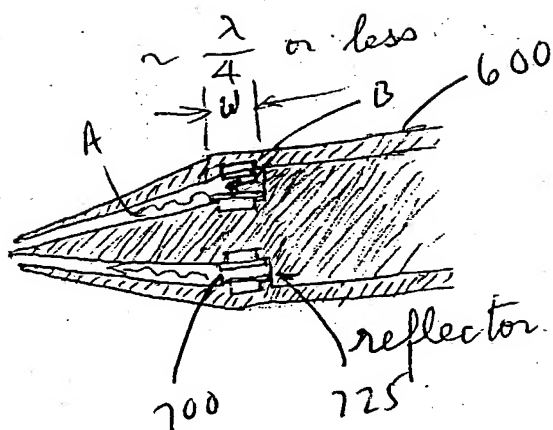


FIG. 11 D

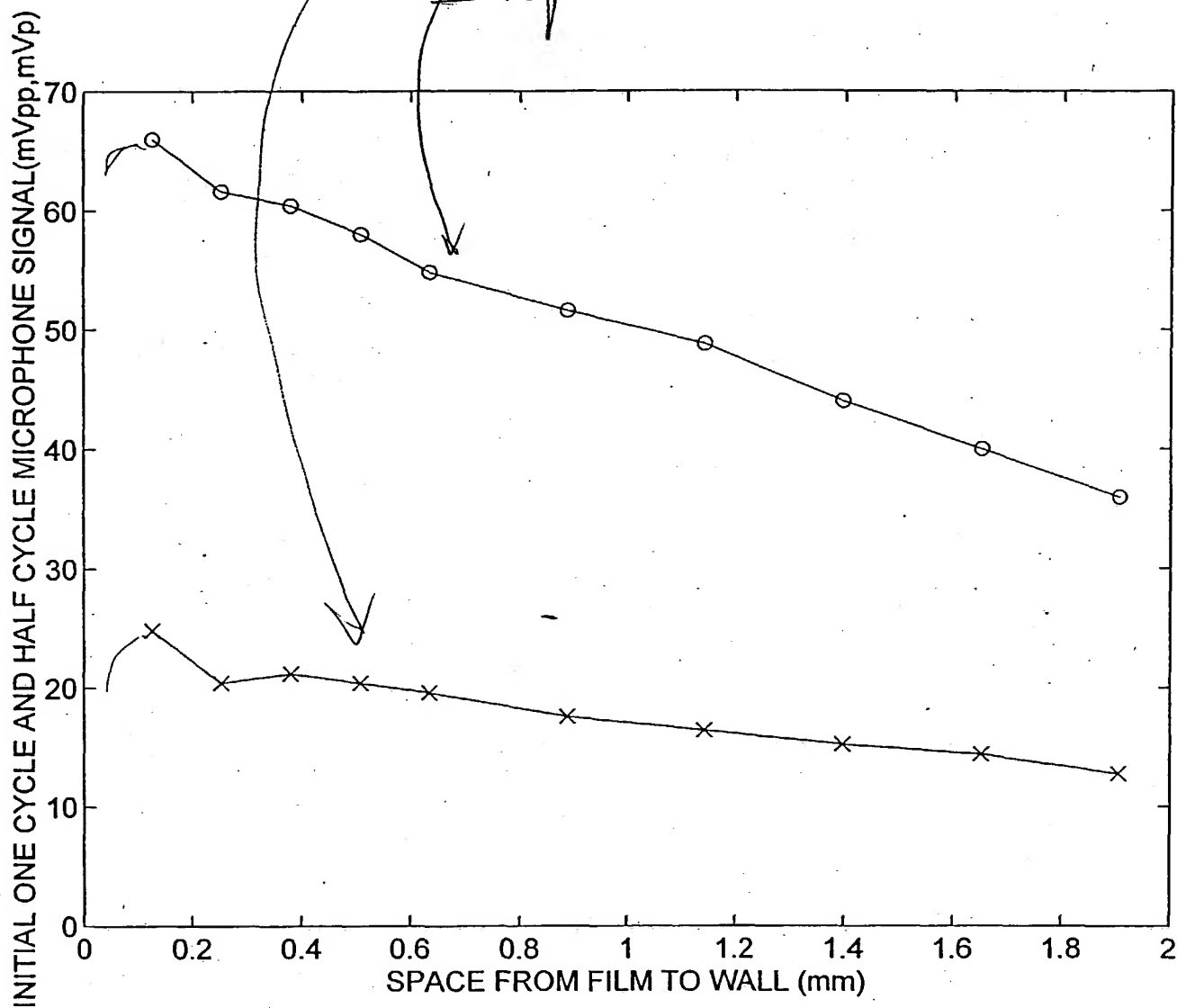
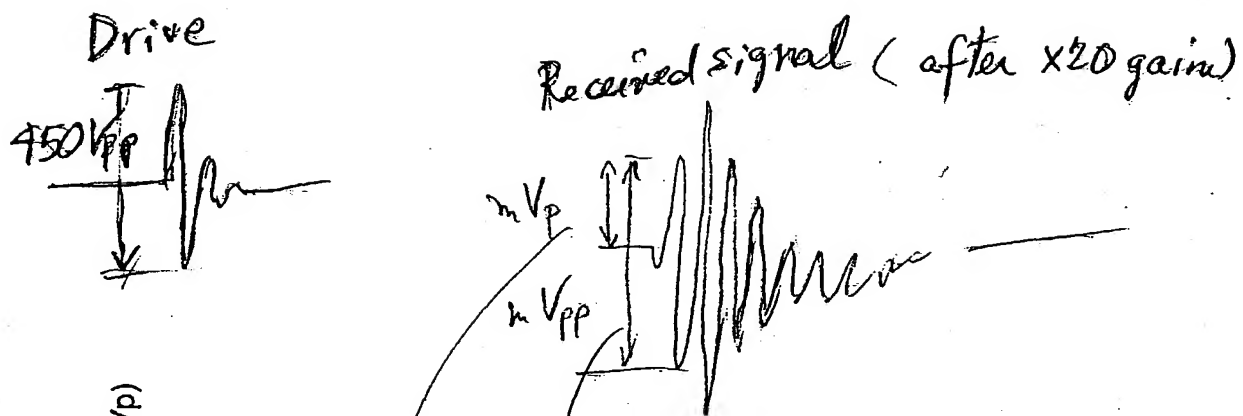
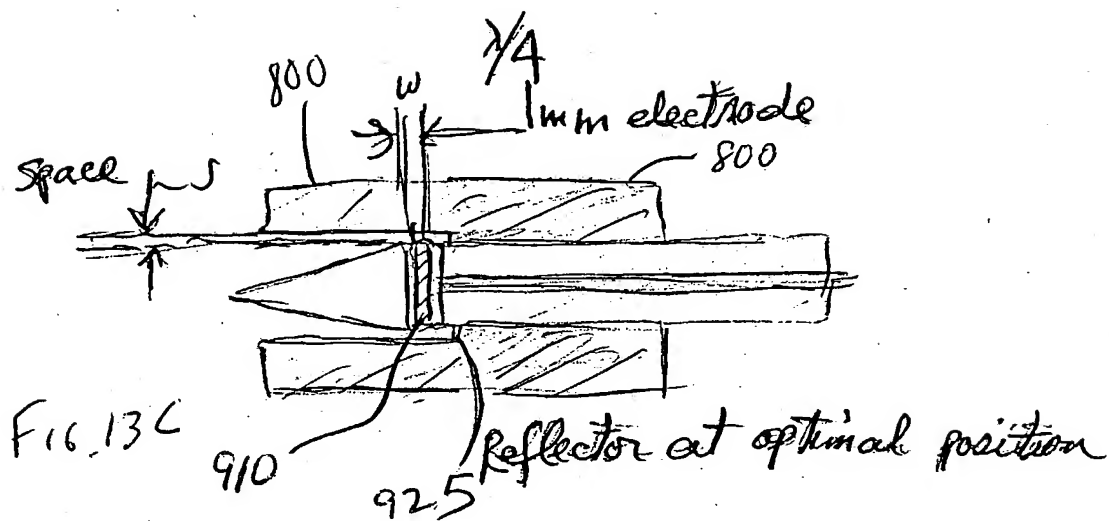


FIG. 12



32Vpp 20 CYCLE BURST, SIGNAL mVpp FROM X20 AMPLIFIER, B&K MICROPHONE (3.4mV/Pa), 12.5cm

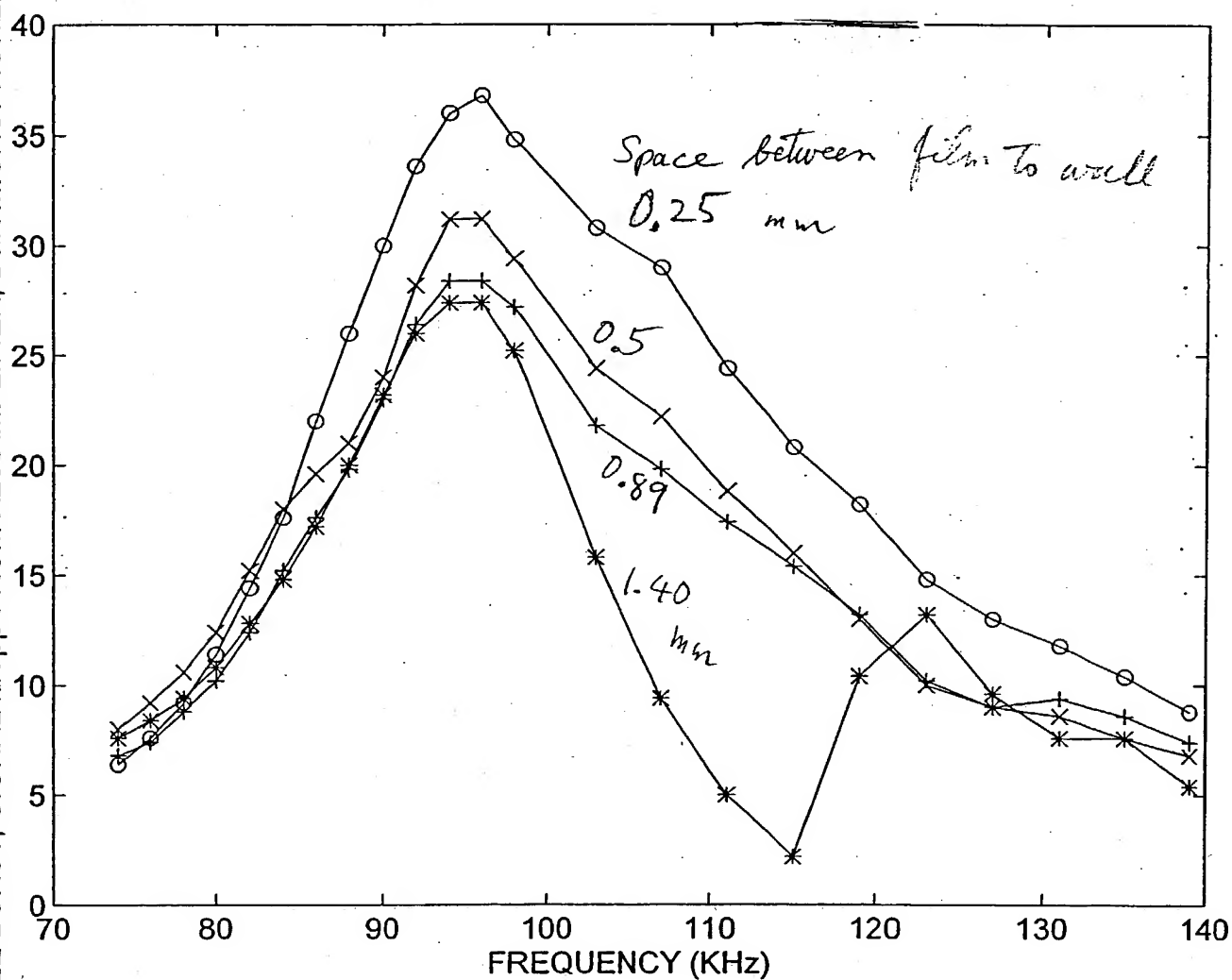


FIG. 13A

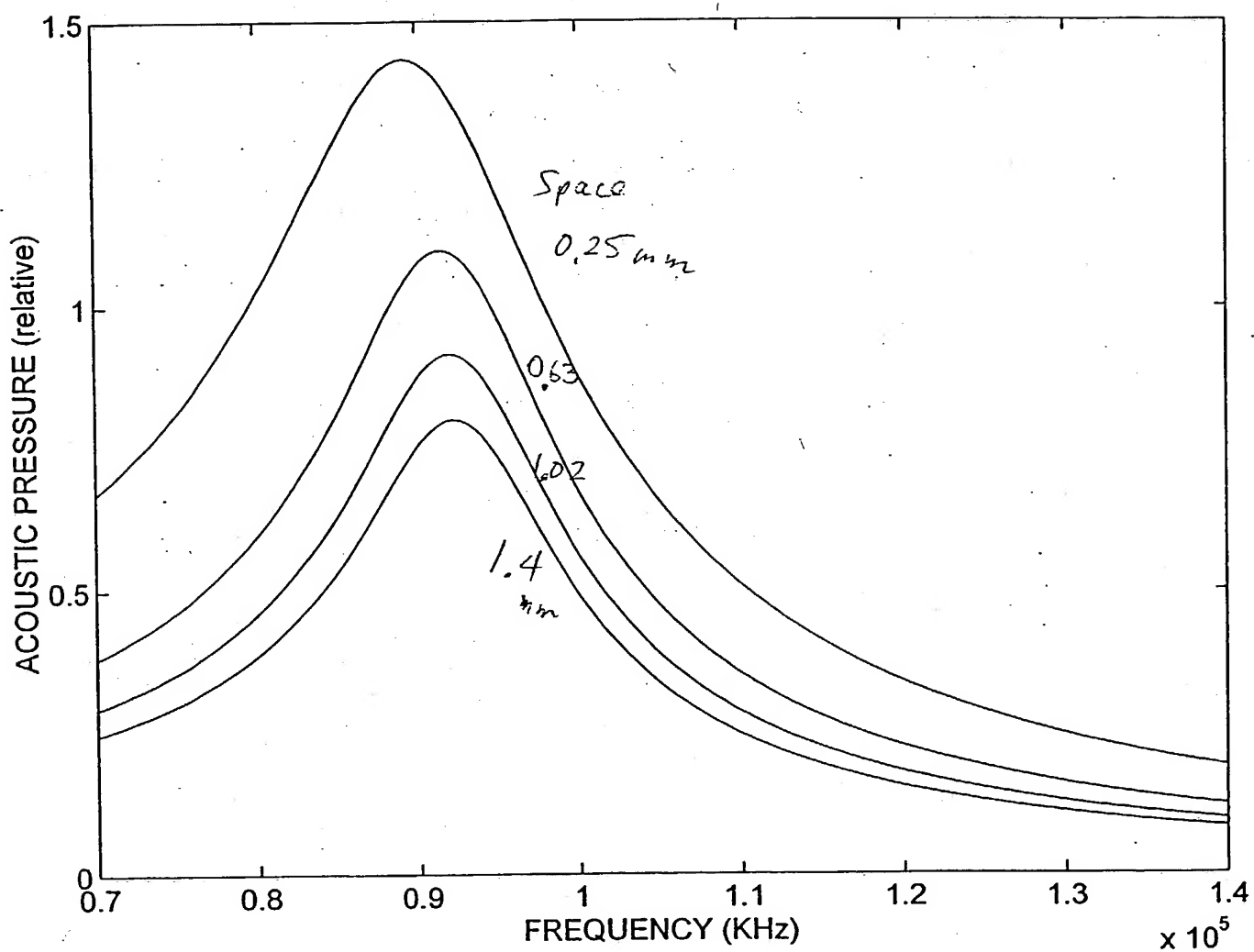
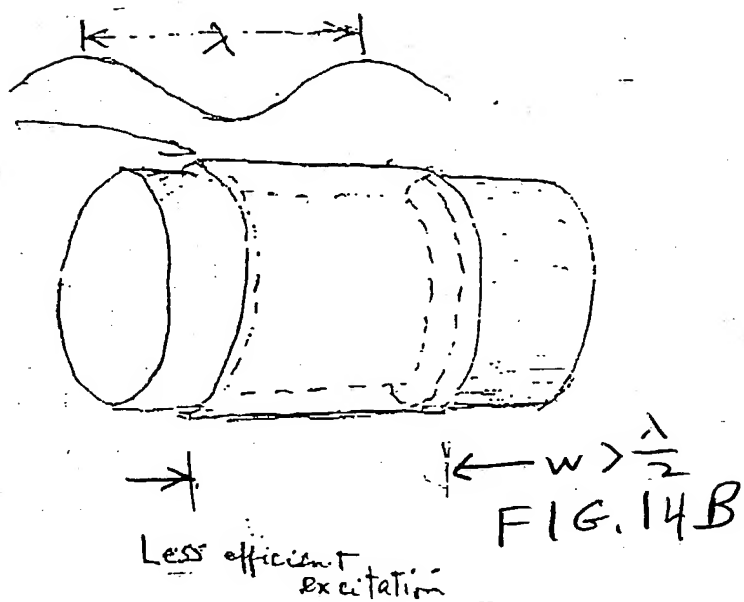
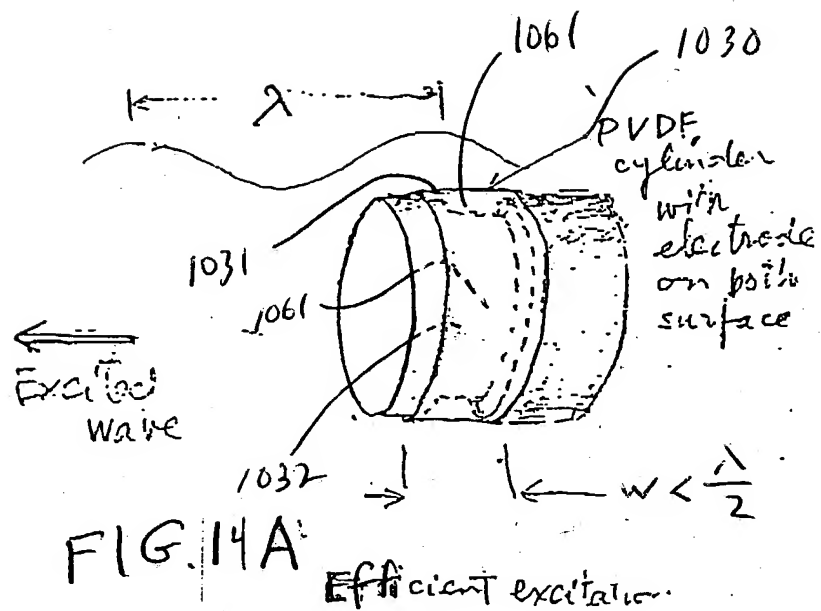
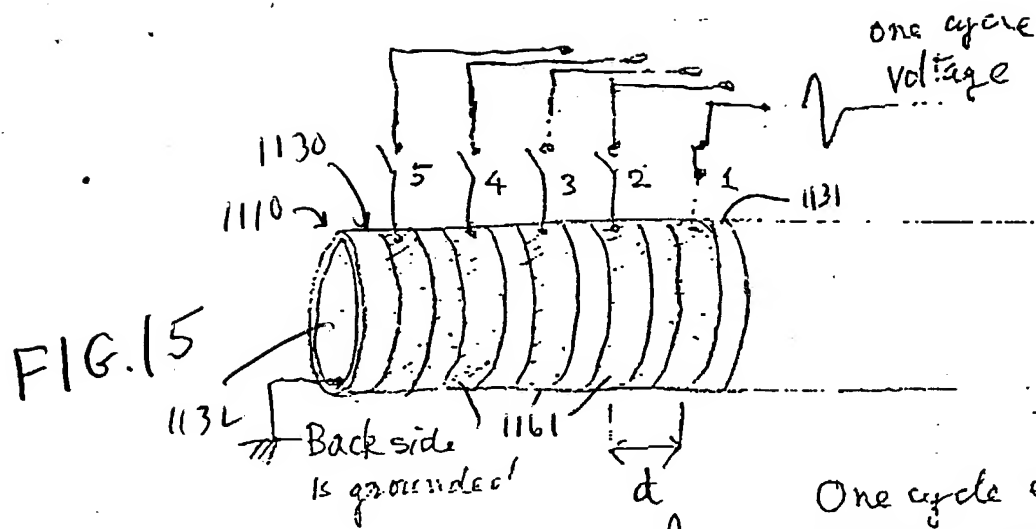


FIG. 13A





One cycle excitation is moved by switch 1 → 2 → Excited wave moves and excitation voltage also move together.

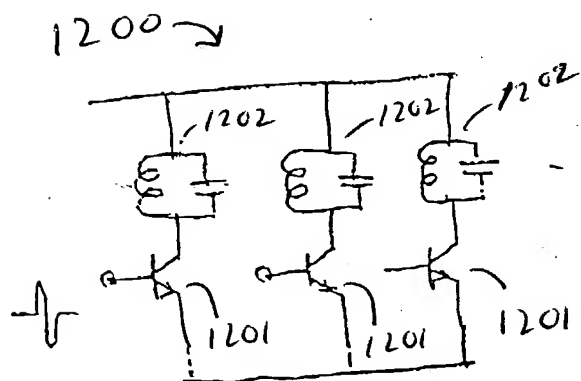


FIG. 16

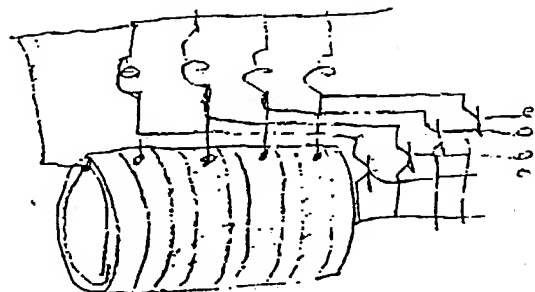


FIG. 17

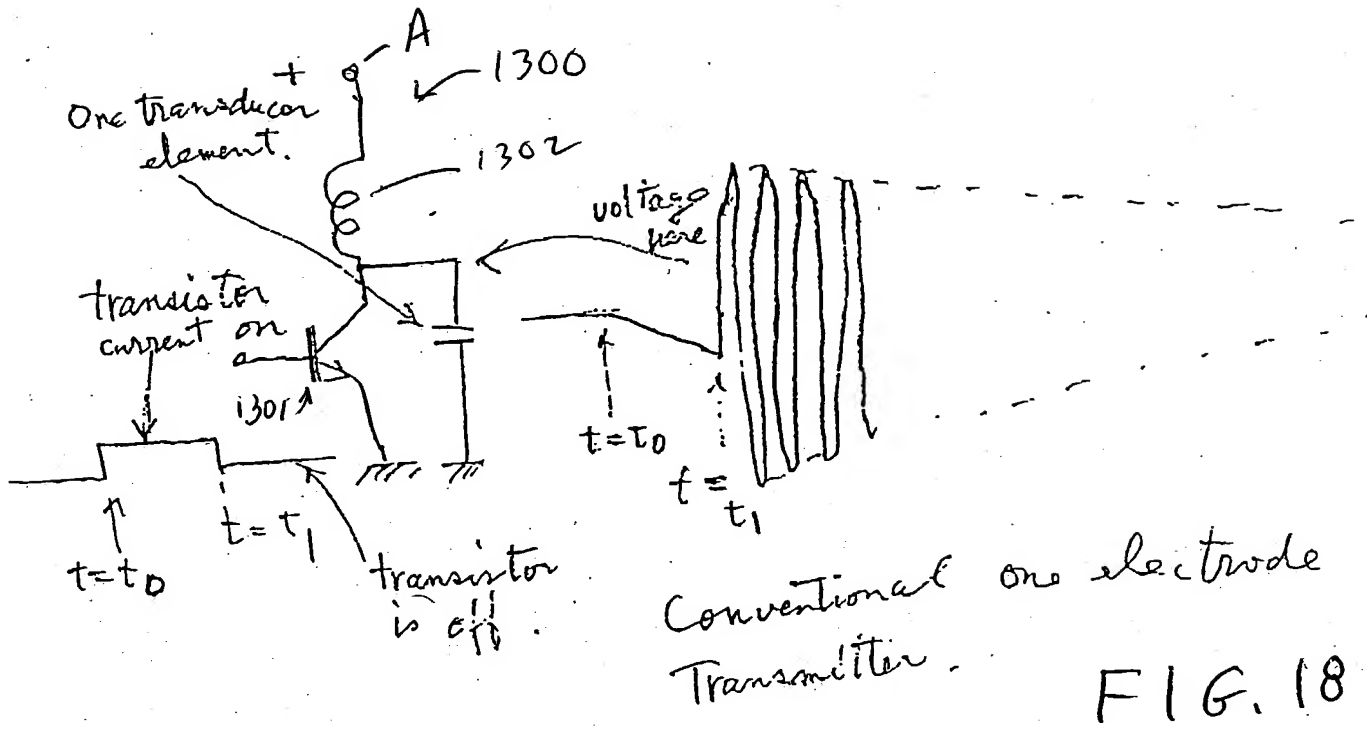


FIG. 18

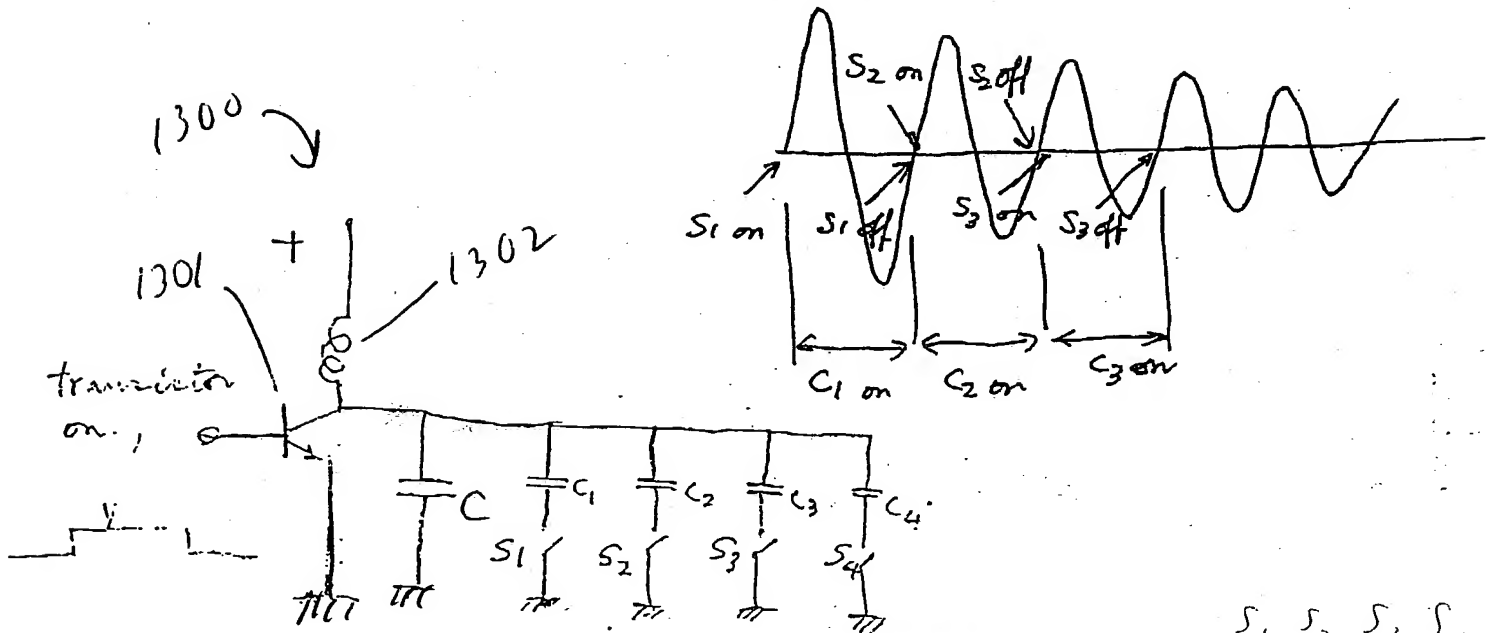
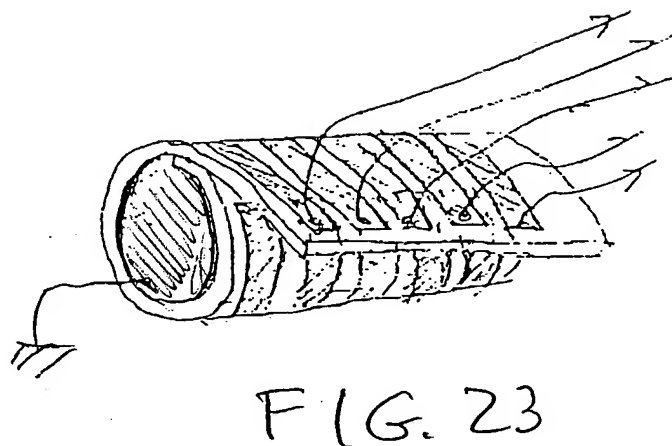
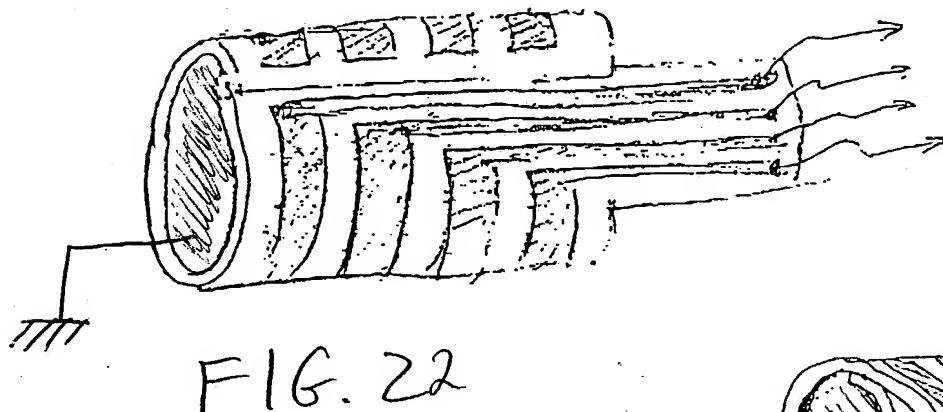
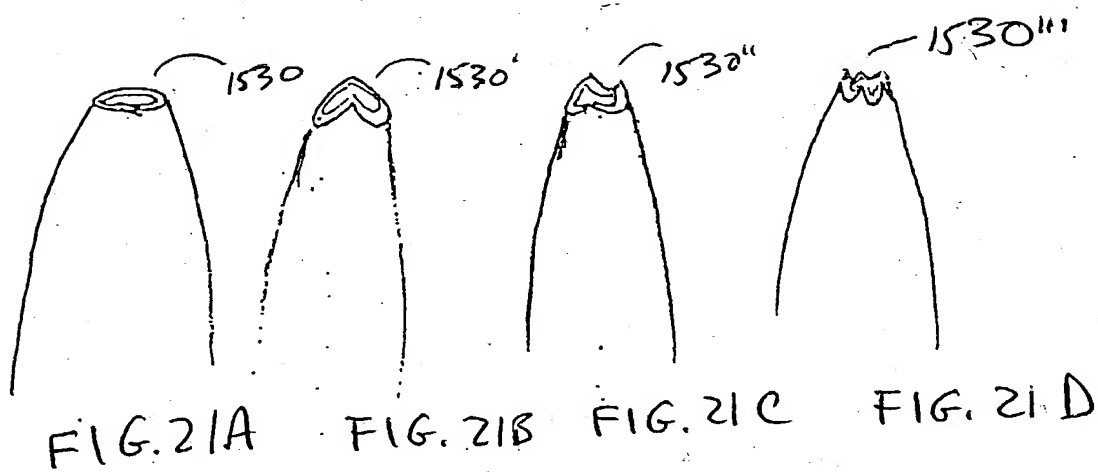
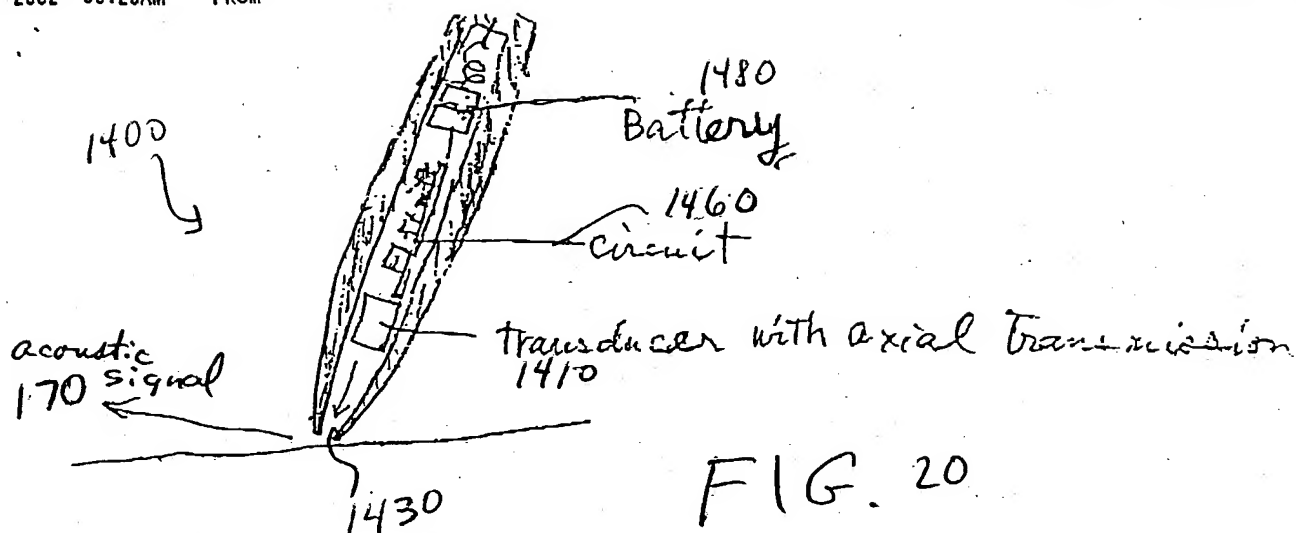


FIG. 19

Every cycle, one of the switches is turned on and sequentially moved towards propagation.



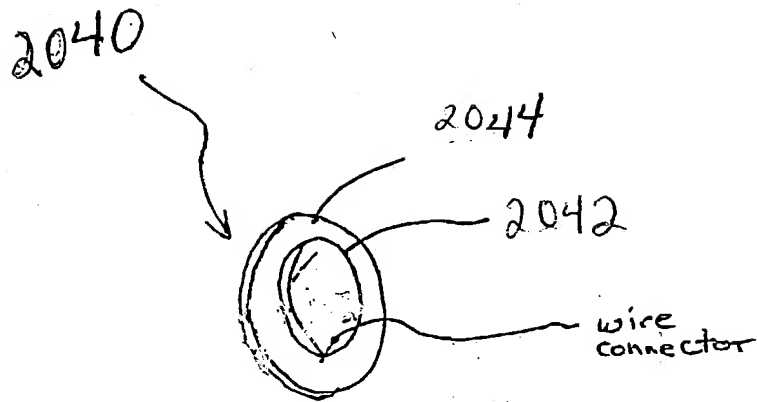


Fig. 24A

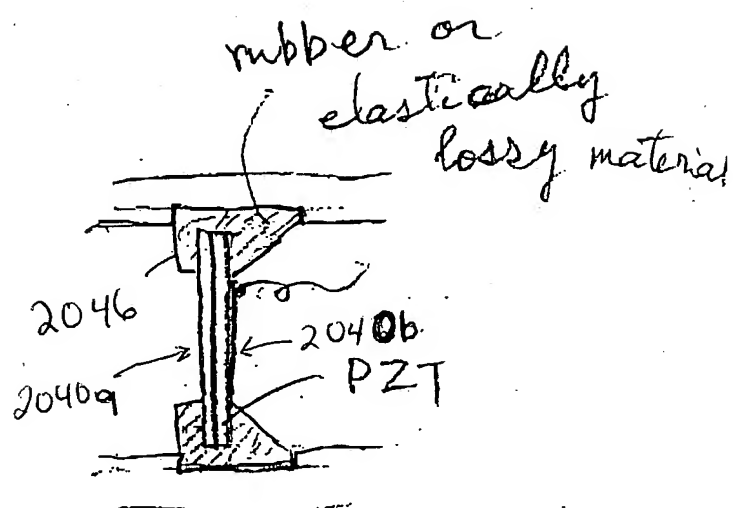


Fig. 24B

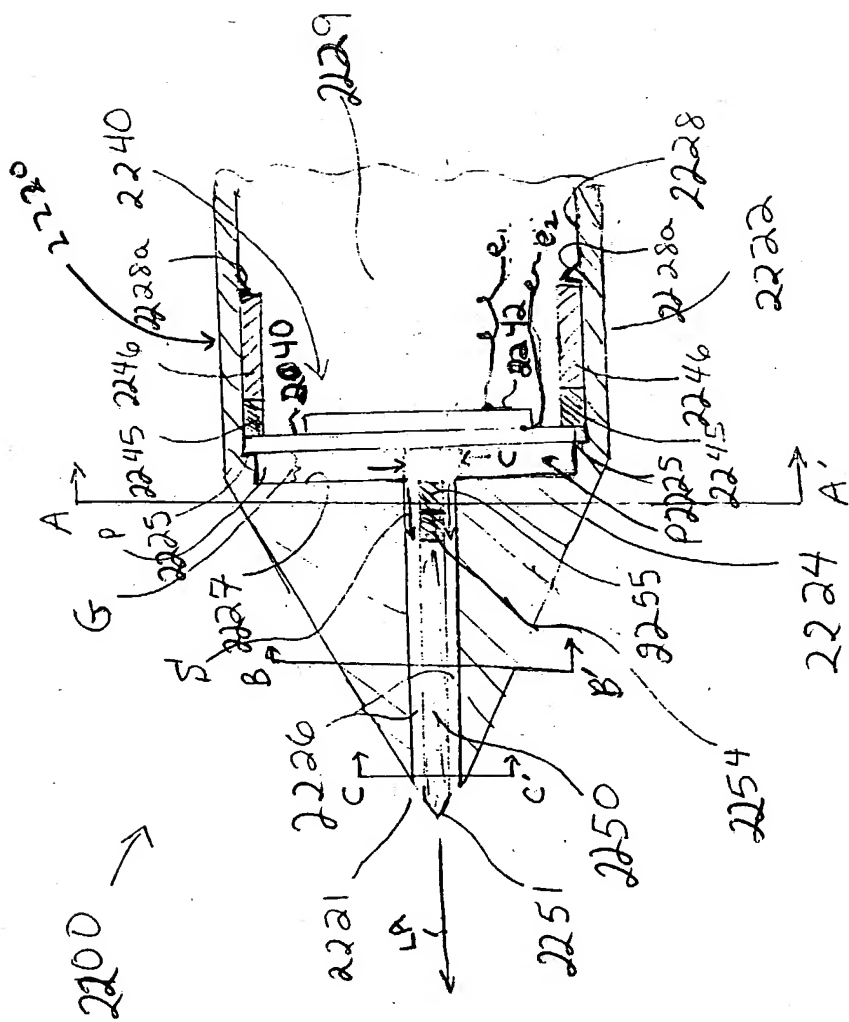
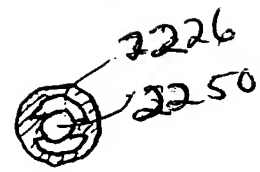
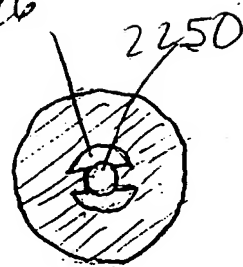
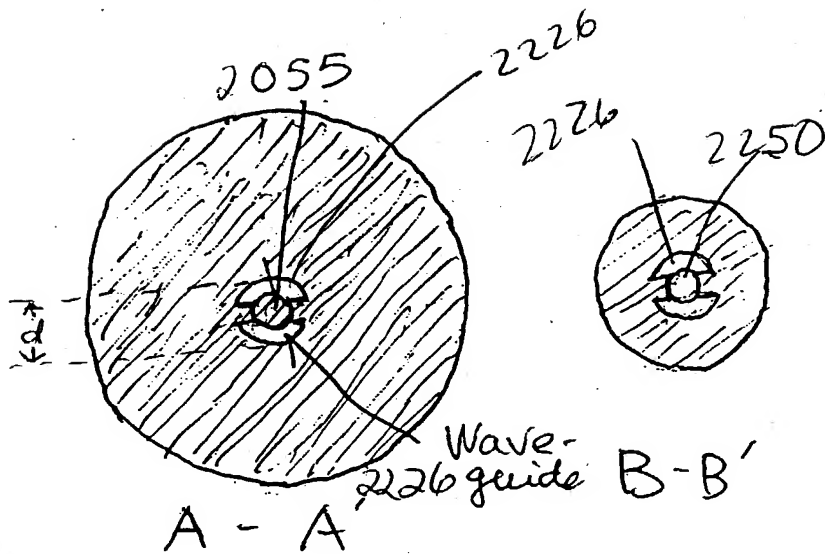


FIG. 25A



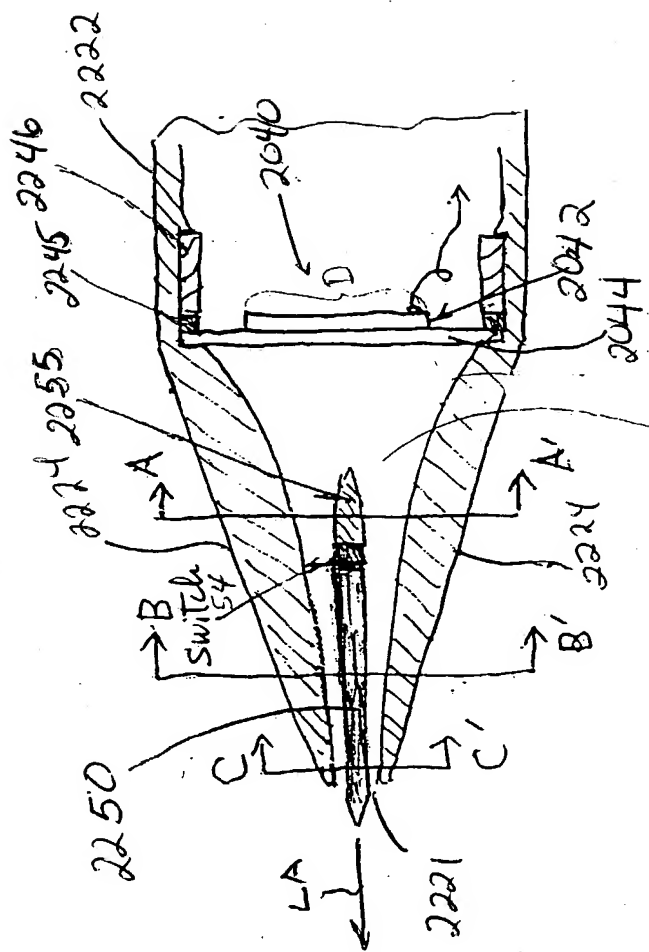


FIG. 26A

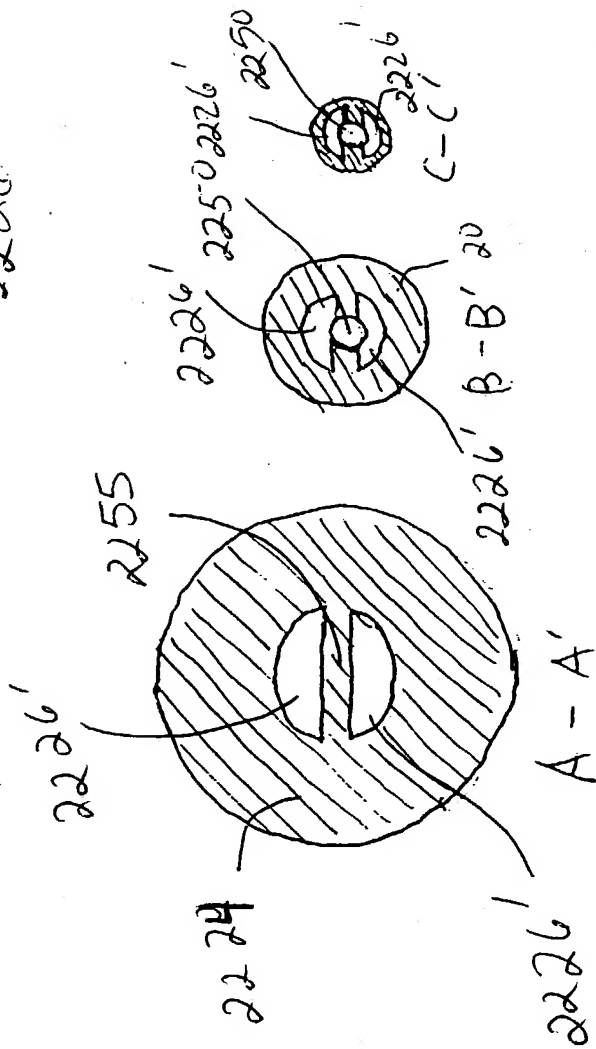


FIG. 26D

FIG. 26C

FIG. 26B

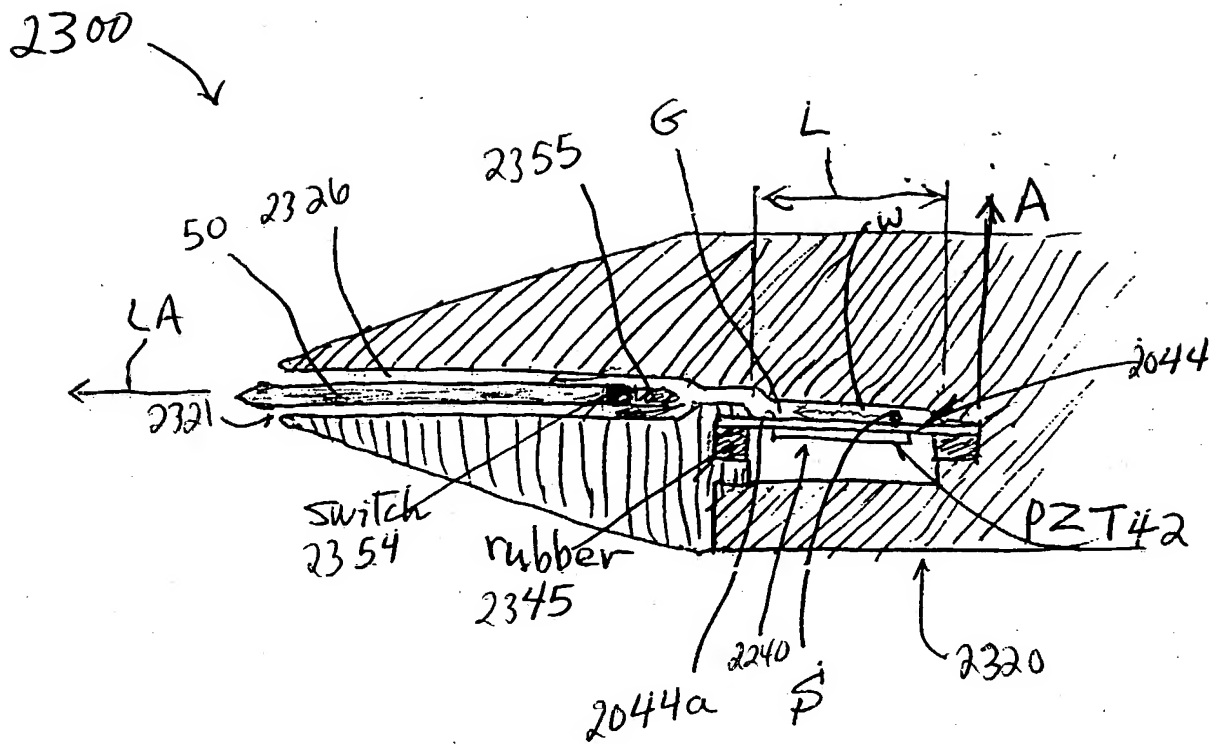


FIG. 27A

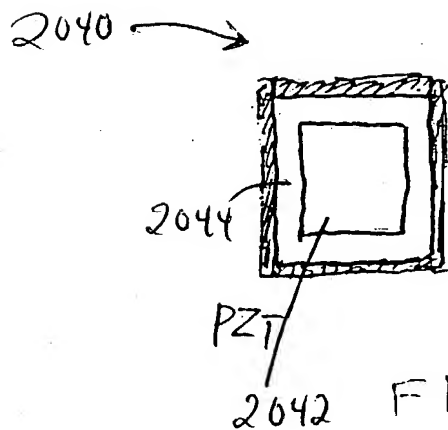


FIG. 27B

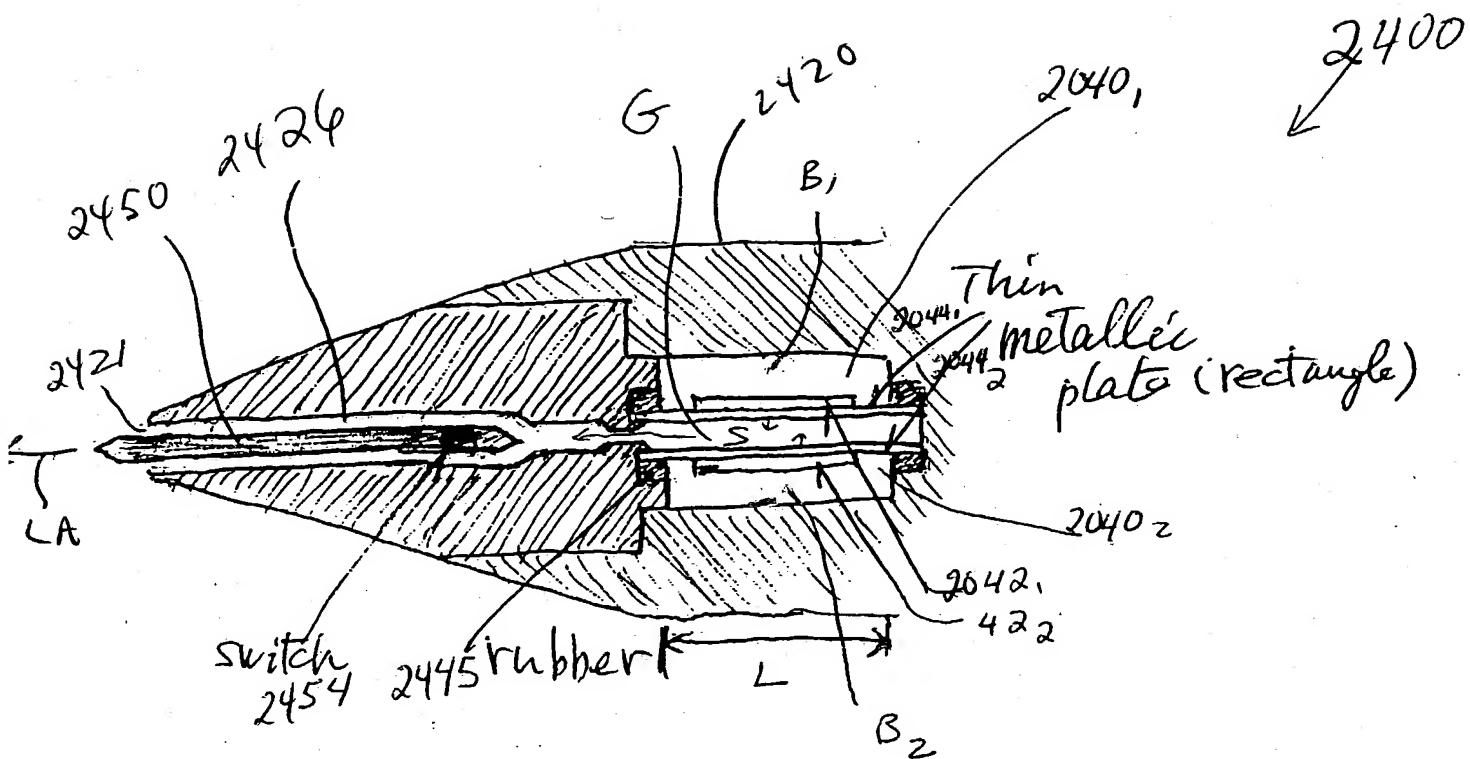
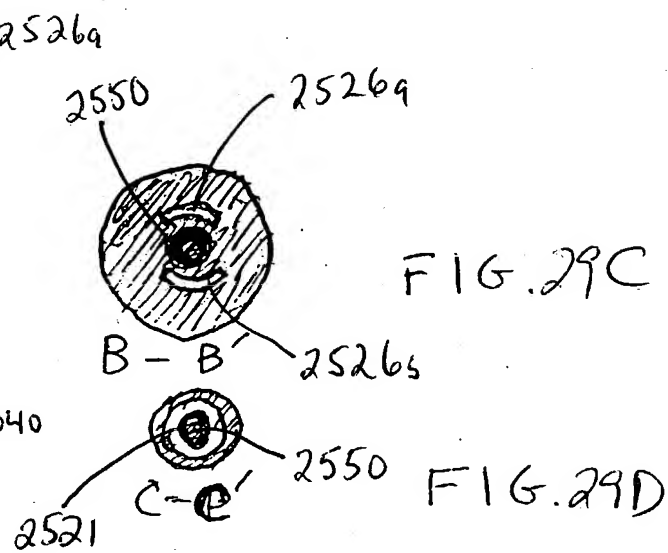
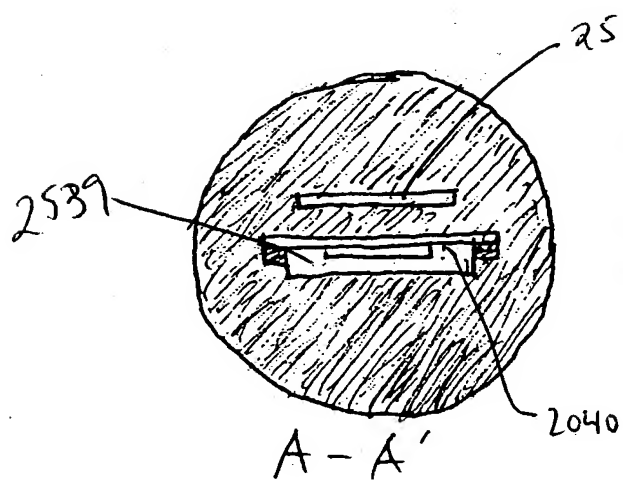
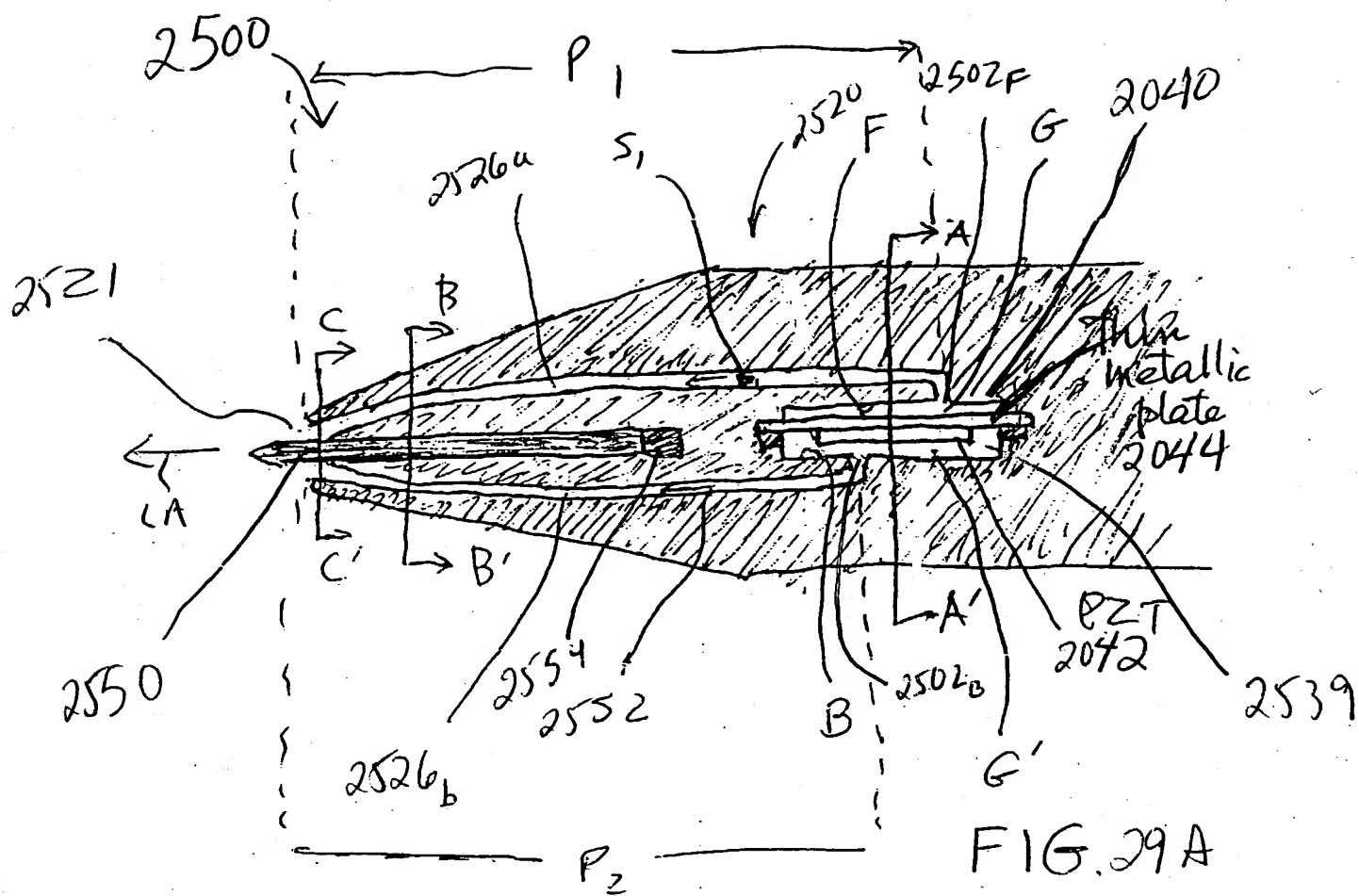


FIG. 28



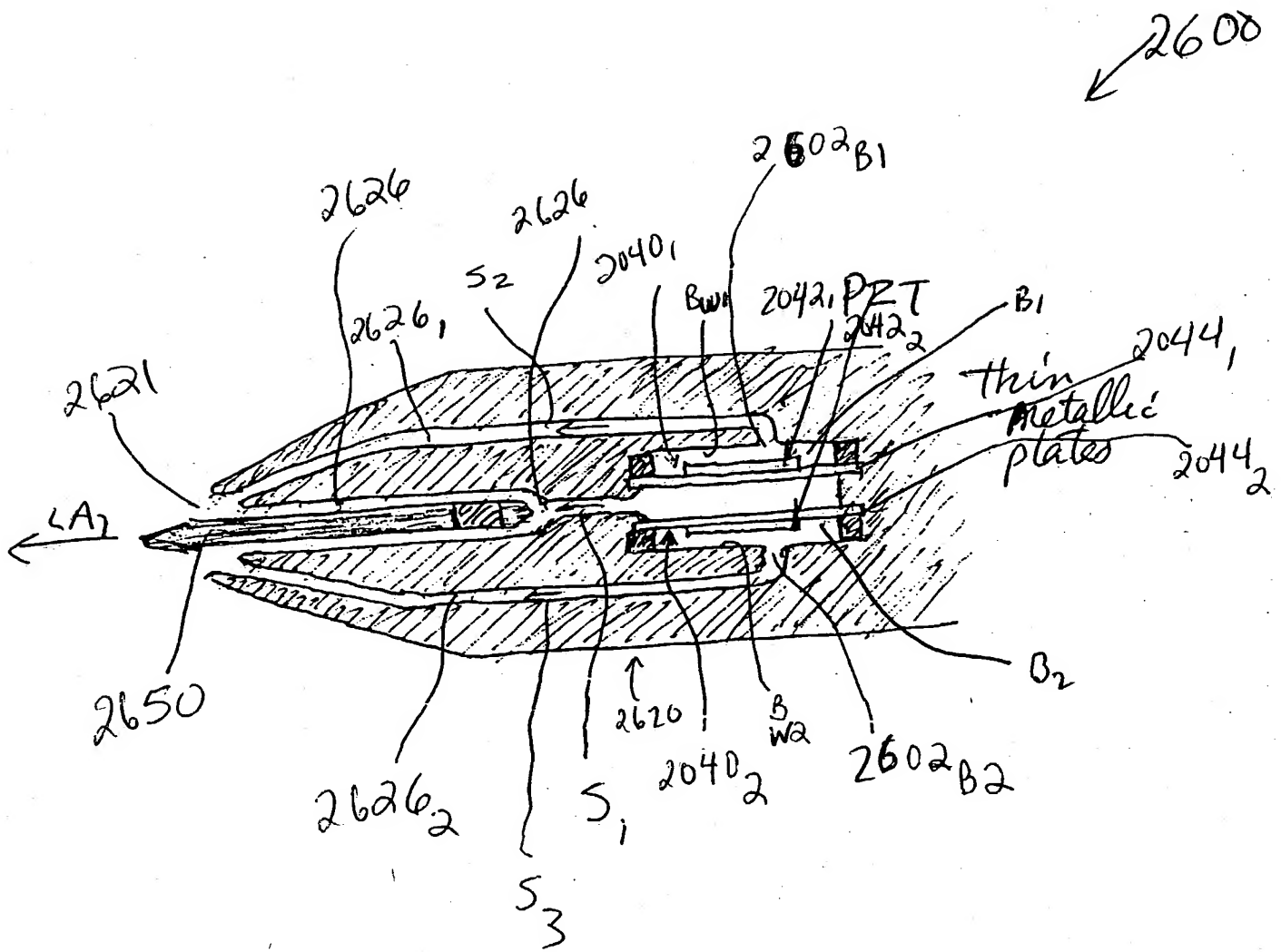


FIG. 30.

Fig. 31A

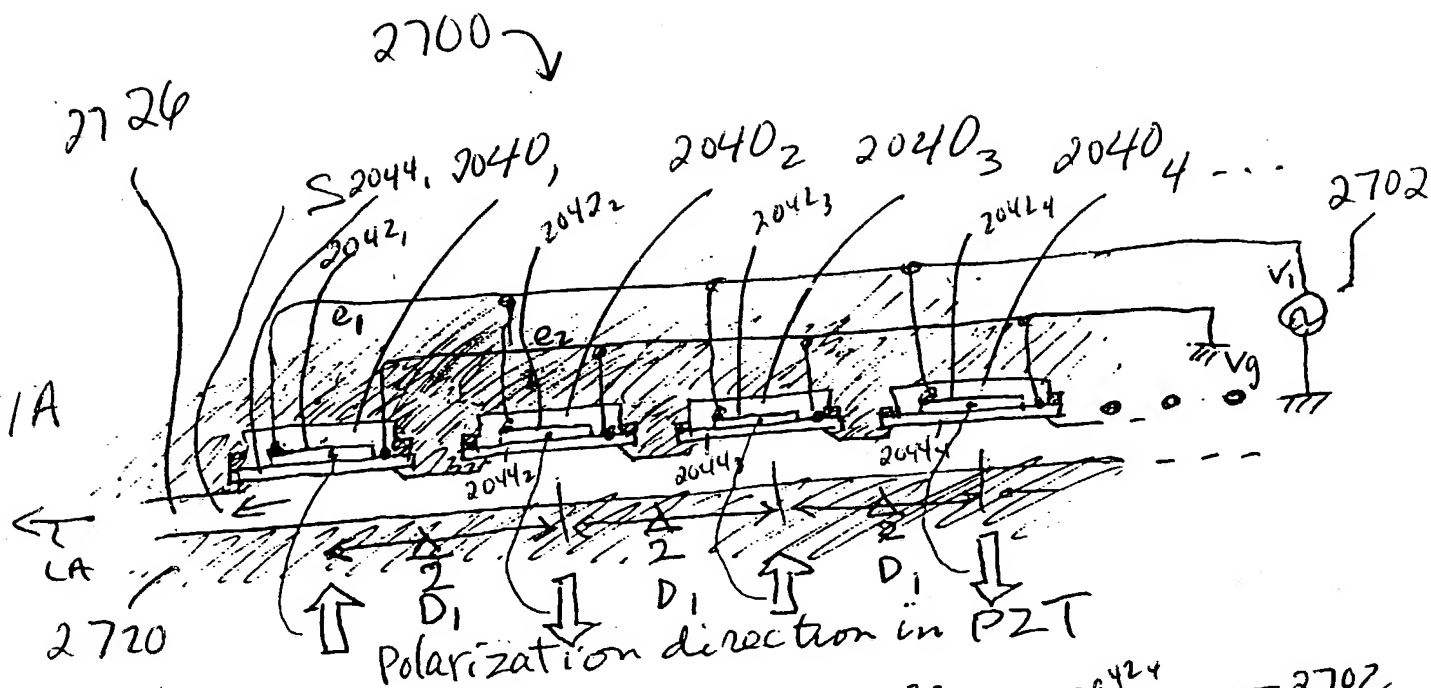
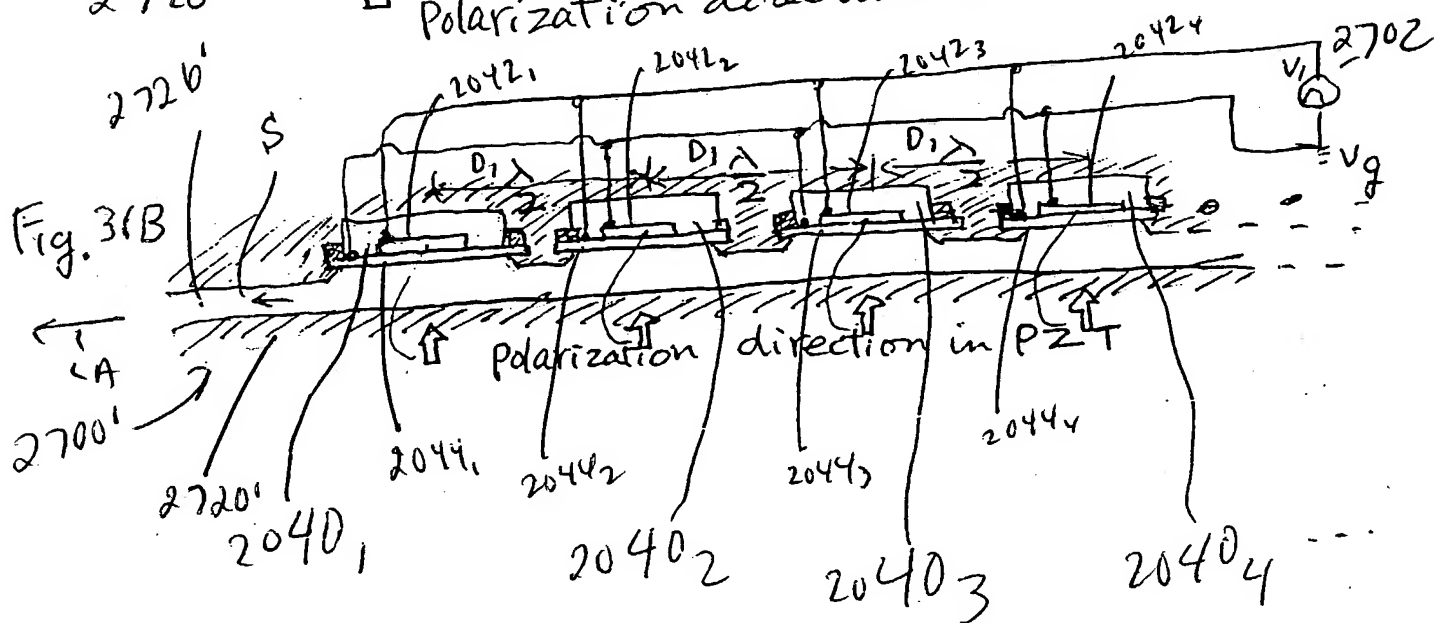


Fig. 31B



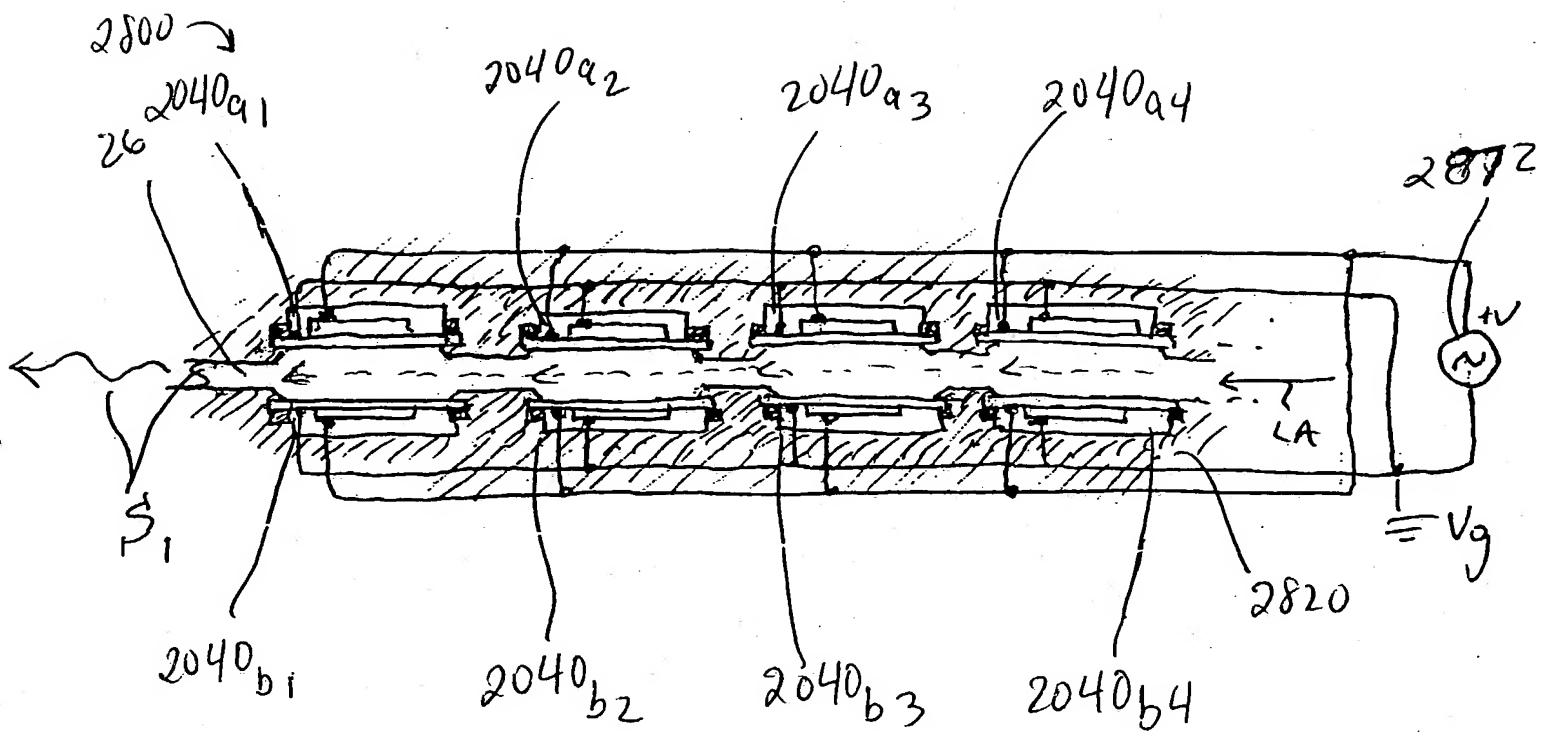


FIG. 32A

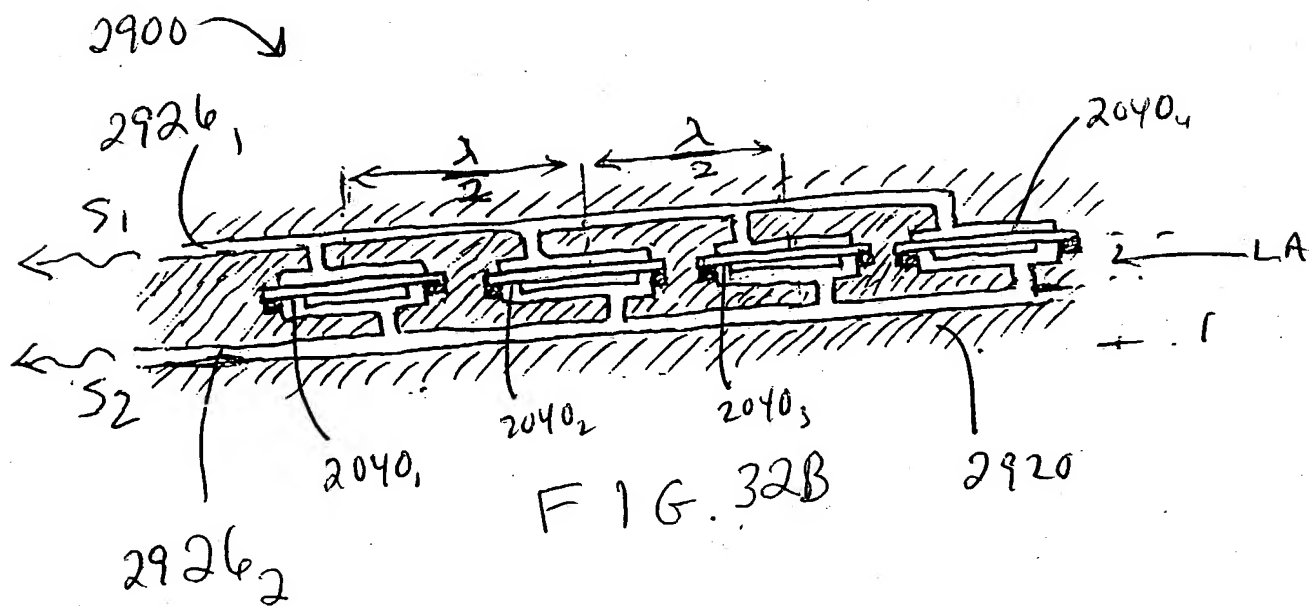


FIG. 32B

4000

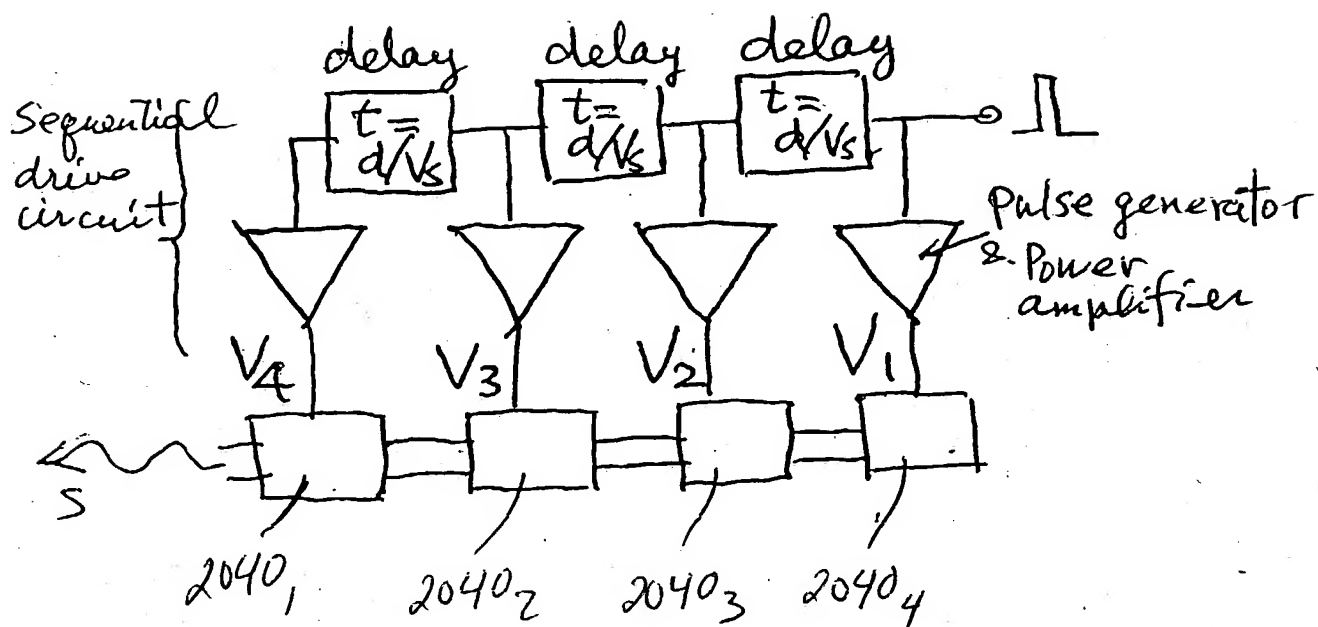


FIG. 33

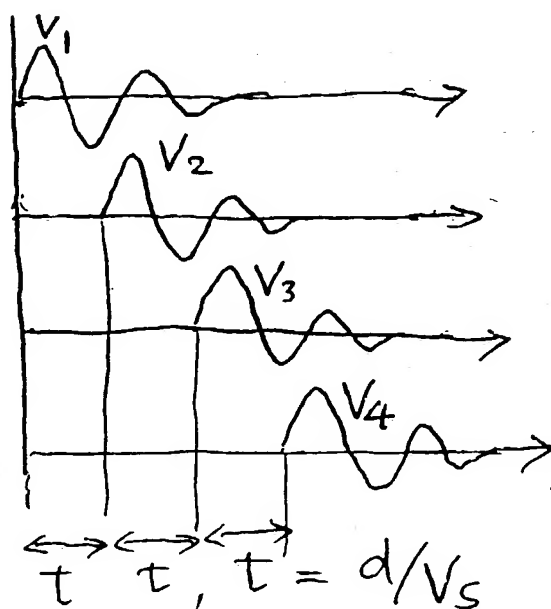


FIG. 34

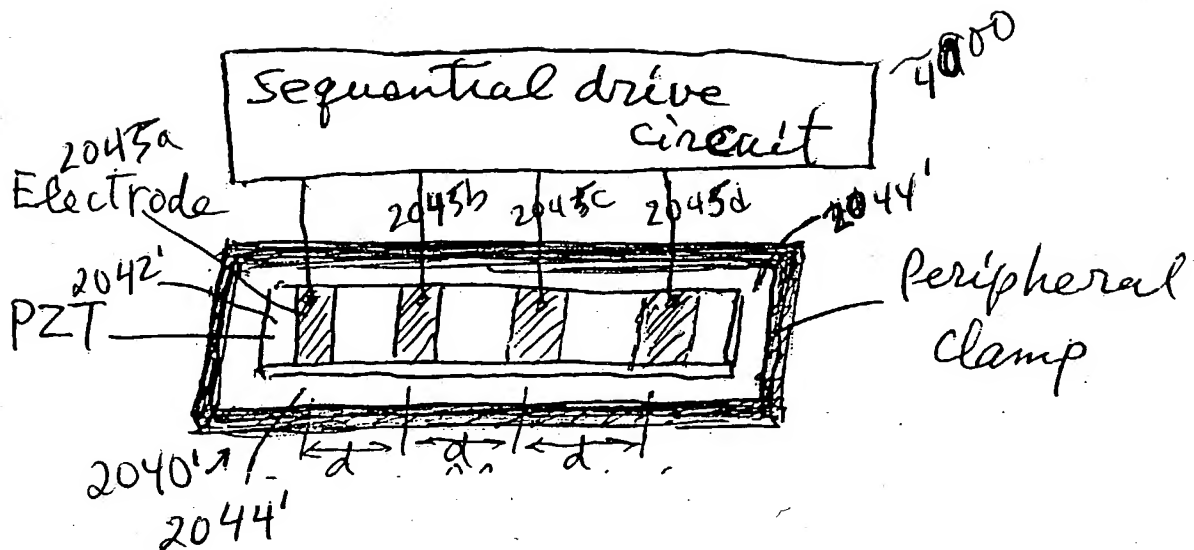


FIG. 35

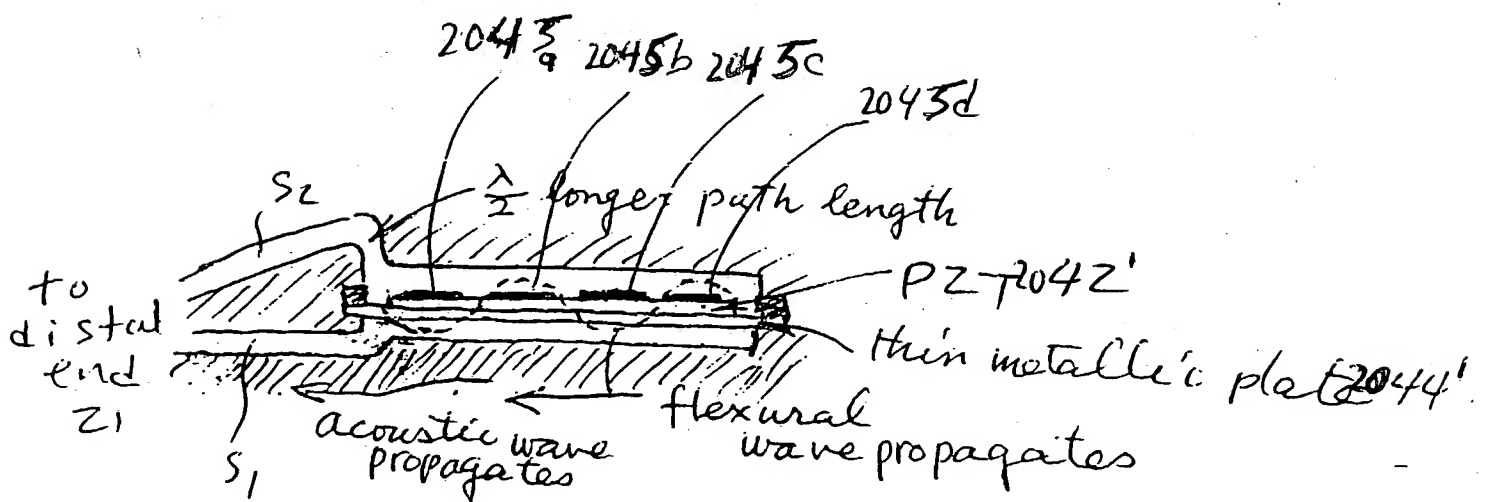


FIG. 36

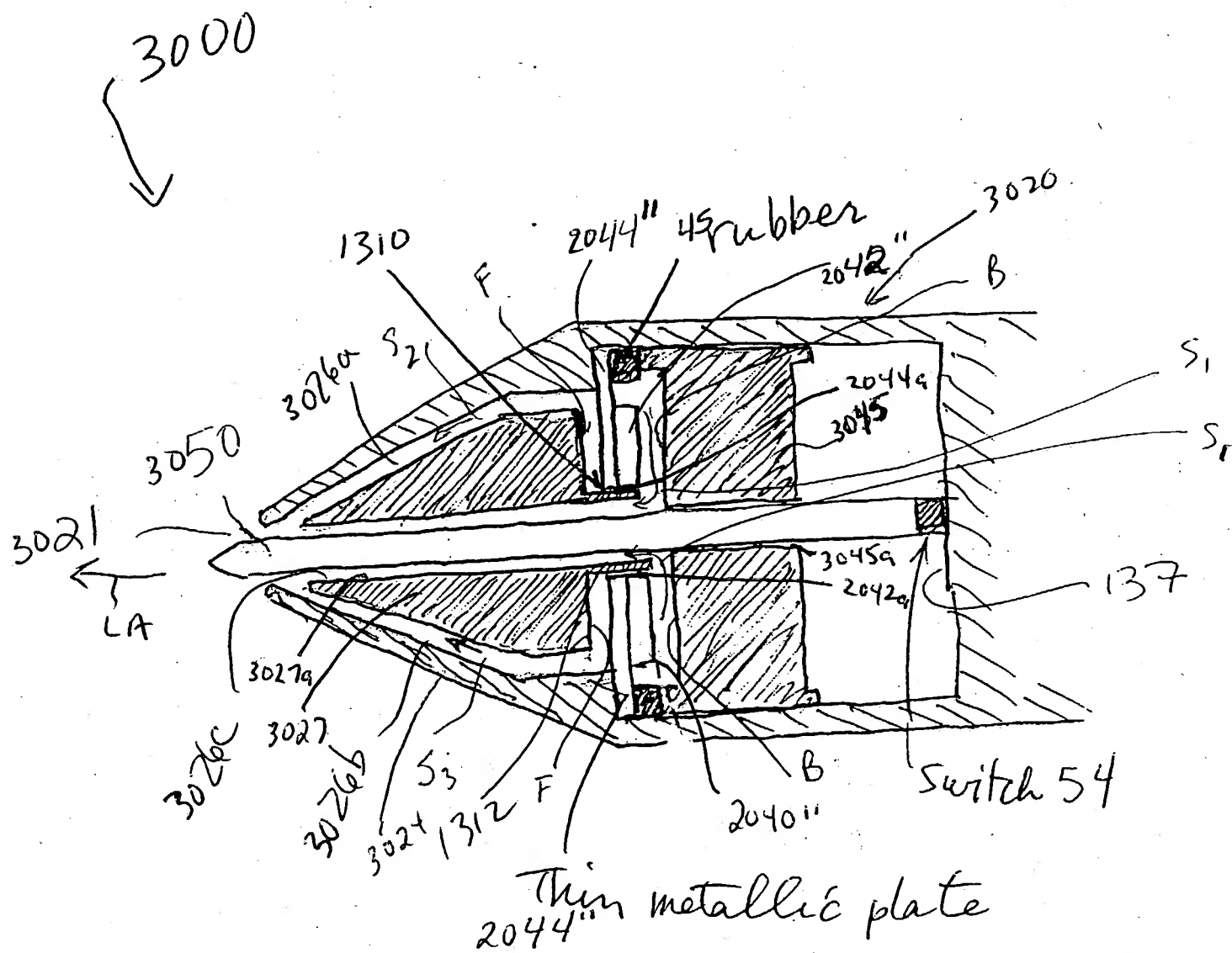
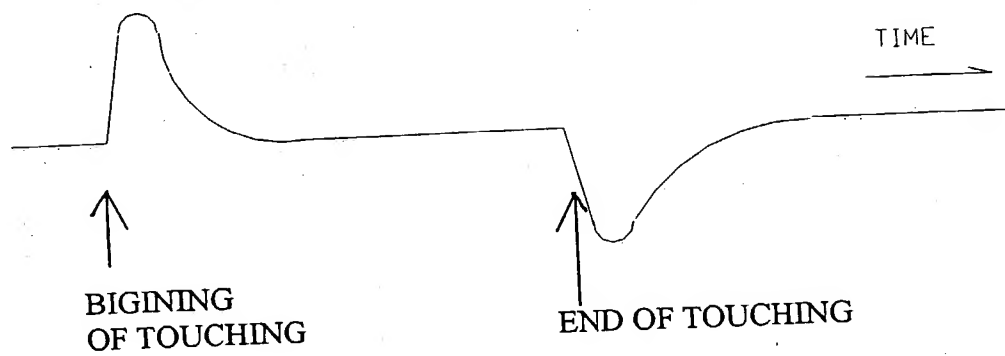
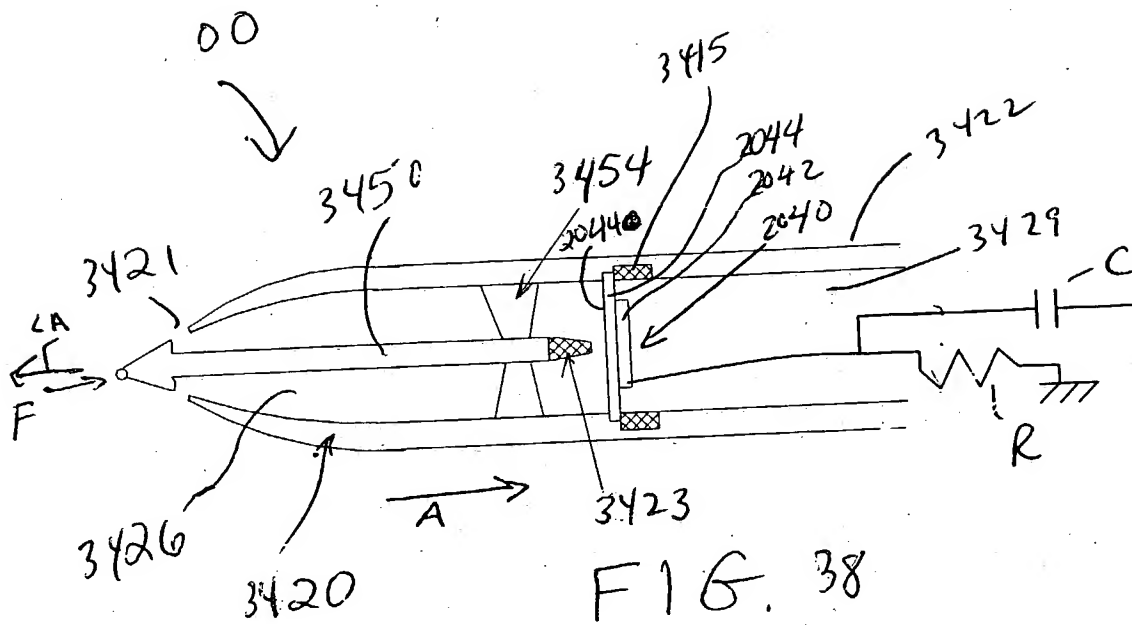


FIG. 37



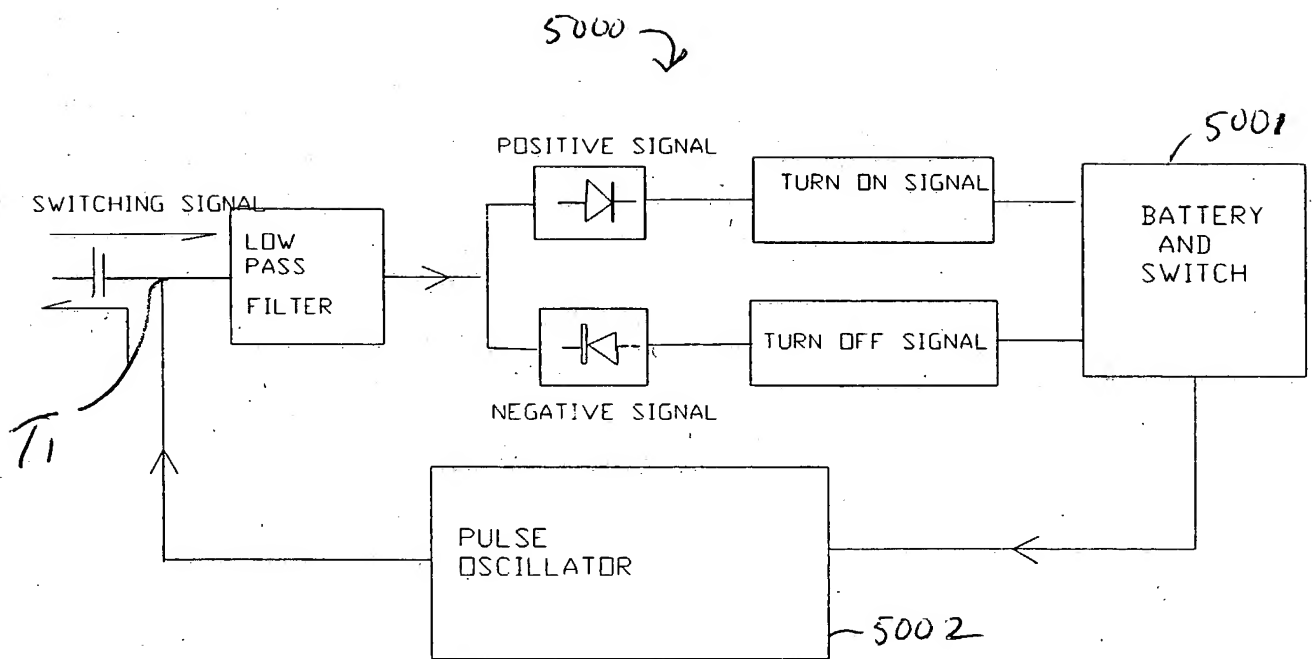


FIG. 40